

No. 004

24-month Chronic and Carcinogenic Inhalation Toxicological Study of
Methanol in Fischer Rats

(Vol. 8)

Individual Major Pathological Findings (Female)
Individual Pathological Findings (Female)

September 30, 1985

Mitsubishi Chemical Safety Institute, Ltd.

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APPENDIX 10-F1-24

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL MAJOR PATHOLOGICAL FINDINGS

LEVEL AND SEX : 0 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	2) DAYS	BODY WEIGHT (G)		PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS	REFERENCE (APPENDIX NUMBER)
			INITIAL	FINAL		
1001	Y	740	96.0	306.1	210.1	NO SIGNIFICANT LESION 11-F1-1001
1002	Y	740	93.1	303.0	209.9	ADENOMA: PITUITARY GLAND POLYP: UTERUS ADENOCARCINOMA: CLITORAL GLAND 11-F1-1002
1003	Y	740	97.3	341.4	244.1	PAPILLARY ADENOMA: LUNG ADENOMA: PITUITARY GLAND SQUAMOUS CELL PAPILLOMA : SKIN C-CELL ADENOMA: THYROID GLANDS 11-F1-1003
1004	W	616	98.1	221.6	123.5	ADENOMA: PITUITARY GLAND 11-F1-1004
1005	W	691	105.9	220.1	114.2	ADENOCARCINOMA: CLITORAL GLAND ADENOMA: PITUITARY GLAND 11-F1-1005
1006	W	616	102.7	234.1	131.4	ADENOMA: PITUITARY GLAND 11-F1-1006
1007	W	596	100.6	194.6	94.0	NO SIGNIFICANT LESION 11-F1-1007
1008	Y	740	106.4	333.2	226.8	CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY : KIDNEYS ADENOMA: PITUITARY GLAND 11-F1-1008
1009	Y	740	103.9	277.6	173.7	ADENOMA: PITUITARY GLAND 11-F1-1009

1) FATE : Y, KILLED ON SCHEDULE.; W, KILLED IN EXTREMIS.
2) DAYS : AFTER START OF TREATMENT.

APPENDIX 10-F1-25

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL MAJOR PATHOLOGICAL FINDINGS

LEVEL AND SEX : 0 PPM FEMALE

ANIMAL NUMBER	1) FATE	2) DAYS	BODY WEIGHT (G)		PROBABLE CAUSE OF DEATH OR	MAJOR PATHOLOGICAL FINDINGS	REFERENCE (APPENDIX NUMBER)
			INITIAL	FINAL			
1010	Y	740	105.0	381.3	276.3	POLYP: UTERUS C-CELL ADENOMA: THYROID GLANDS	11-F1-1010
1011	X	711	99.2	362.2	263.0	ASTROCYTOMA: BRAIN	11-F1-1011
1012	X	329	102.9	172.4	69.5	KERATOACANTHOMA: STOMACH KERATOACANTHOMA: TONGUE INTERSTITIAL NEPHRITIS : KIDNEYS	11-F1-1012
1013	Y	740	98.5	284.9	186.4	ISLET-CELL ADENOMA : PANCREAS	11-F1-1013
1014	W	651	103.0	222.6	119.6	SQUAMOUS CELL CARCINOMA : TONGUE	11-F1-1014
1015	W	547	100.8	291.8	191.0	ADENOMA: PITUITARY GLAND	11-F1-1015
1016	Y	740	101.4	310.0	208.6	PAPILLARY ADENOMA: LUNG C-CELL ADENOMA: THYROID GLANDS	11-F1-1016
1017	X	646	92.4	296.7	204.3	POLYP: UTERUS MONONUCLEAR CELL LEUKEMIA : MULTIPLE ORGANS	11-F1-1017
1018	Y	740	98.0	317.5	219.5	POLYP: UTERUS	11-F1-1018
1019	Y	741	100.0	275.0	175.0	NO SIGNIFICANT LESION	11-F1-1019
1020	Y	741	100.8	367.0	266.2	NO SIGNIFICANT LESION	11-F1-1020

1) FATE : Y , KILLED ON SCHEDULE ; X , FOUND DEAD ; W , KILLED IN EXTREMIS .
 2) DAYS : AFTER START OF TREATMENT .

APPENDIX 10-F1-26

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL MAJOR PATHOLOGICAL FINDINGS

LEVEL AND SEX : 0 PPM FEMALE

ANIMAL NUMBER	1) FATE	2) DAYS	BODY WEIGHT (G)		PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS	REFERENCE (APPENDIX NUMBER)
			INITIAL	FINAL		
1021	Y	741	96.0	333.7	237.7	NO SIGNIFICANT LESION 11-F1-1021
1022	Y	741	100.2	318.3	218.1	FIBROADENOMA: MAMMARY GLAND 11-F1-1022
1023	Y	741	95.9	315.2	219.3	FIBROADENOMA: MAMMARY GLAND MONONUCLEAR CELL LEUKEMIA : MULTIPLE ORGANS 11-F1-1023
1024	Y	741	93.1	294.5	201.4	ADENOMA: PITUITARY GLAND C-CELL ADENOMA: THYROID GLANDS ADENOCARCINOMA: UTERUS 11-F1-1024
1025	Y	741	103.2	330.5	227.3	ADENOMA: PITUITARY GLAND 11-F1-1025
1026	Y	741	93.9	348.3	254.4	C-CELL ADENOMA: THYROID GLANDS 11-F1-1026
1027	W	645	88.6	304.5	215.9	MONONUCLEAR CELL LEUKEMIA : MULTIPLE ORGANS MEDULLOBLASTOMA: BRAIN 11-F1-1027
1028	W	687	104.3	299.1	194.8	MONONUCLEAR CELL LEUKEMIA : MULTIPLE ORGANS POLYP: UTERUS 11-F1-1028
1029	Y	741	98.8	338.2	239.4	ADENOMA: PITUITARY GLAND GRANULOSA-THECA CELL TUMOR: OVARIES 11-F1-1029

1) FATE : Y , KILLED ON SCHEDULE ; W , KILLED IN EXTREMIS .

2) DAYS : AFTER START OF TREATMENT.

APPENDIX 10-F1-27

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL MAJOR PATHOLOGICAL FINDINGS

LEVEL AND SEX : 0 PPM FEMALE

ANIMAL NUMBER	1) FATE	2) DAYS	BODY WEIGHT (G)		PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS	STUDY NO. 83004 REFERENCE (APPENDIX NUMBER)
			INITIAL	FINAL		
1030	Y	742	105.9	369.2	263.3 C-CELL ADENOMA: THYROID GLANDS ADENOMA: PITUITARY GLAND	11-F1-1030
1031	Y	742	96.4	315.7	219.3 C-CELL ADENOMA: THYROID GLANDS FOLLICULAR ADENOMA : THYROID GLANDS	11-F1-1031
1032	Y	742	93.9	290.2	196.3 NO SIGNIFICANT LESION	11-F1-1032
1033	W	715	95.9	293.6	197.7 C-CELL ADENOMA: THYROID GLANDS MONONUCLEAR CELL LEUKEMIA : MULTIPLE ORGANS	11-F1-1033
1034	Y	742	105.5	371.6	266.1 ADENOMA: PITUITARY GLAND MONONUCLEAR CELL LEUKEMIA : MULTIPLE ORGANS	11-F1-1034
1035	Y	742	95.4	280.1	184.7 MONONUCLEAR CELL LEUKEMIA : MULTIPLE ORGANS	11-F1-1035
1036	W	694	98.9	275.9	177.0 POLYP: UTERUS SQUAMOUS CELL CARCINOMA : TONGUE	11-F1-1036
1037	W	721	96.7	270.1	173.4 ADENOMA: PITUITARY GLAND MONONUCLEAR CELL LEUKEMIA : MULTIPLE ORGANS	11-F1-1037
1038	Y	742	97.8	292.6	194.8 MONONUCLEAR CELL LEUKEMIA : MULTIPLE ORGANS	11-F1-1038

1) FATE : Y , KILLED ON SCHEDULE ; W , KILLED IN EXTREMIS .
2) DAYS : AFTER START OF TREATMENT.

APPENDIX 10-F1-28

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL MAJOR PATHOLOGICAL FINDINGS

LEVEL AND SEX : 0 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	2) DAYS	BODY WEIGHT (G)			PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS	REFERENCE (APPENDIX NUMBER)
			INITIAL	FINAL	GAIN		
1039	Y	742	99.2	336.8	237.6	FIBROADENOMA: MAMMARY GLAND	11-F1-1039
1040	Y	743	97.9	343.8	245.9	NO SIGNIFICANT LESION	11-F1-1040
1041	X	687	96.2	325.5	229.3	PHEOCHROMOCYTOMA: ADRENAL GLANDS	11-F1-1041
1042	Y	743	99.5	324.9	225.4	POLYP: UTERUS FIBROADENOMA: MAMMARY GLAND C-CELL ADENOMA: THYROID GLANDS ASTROCYTOMA: BRAIN	11-F1-1042
1043	W	708	101.1	289.4	188.3	MONONUCLEAR CELL LEUKEMIA : MULTIPLE ORGANS	11-F1-1043
1044	X	636	99.6	307.2	207.6	MONONUCLEAR CELL LEUKEMIA : MULTIPLE ORGANS FIBROADENOMA: MAMMARY GLAND	11-F1-1044
1045	W	572	100.5	317.7	217.2	MESOTHELIOMA: PERITONEUM ADENOMA: PITUITARY GLAND	11-F1-1045
1046	Y	743	95.2	321.0	225.8	ADENOMA: PITUITARY GLAND	11-F1-1046
1047	Y	743	109.2	356.7	247.5	ADENOMA: UTERUS	11-F1-1047
1048	Y	743	102.5	321.2	218.7	NO SIGNIFICANT LESION	11-F1-1048

1) FATE : Y / KILLED ON SCHEDULE ; X / FOUND DEAD ; W / KILLED IN EXTREMIS .
2) DAYS : AFTER START OF TREATMENT.

APPENDIX 10-F1-29

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL MAJOR PATHOLOGICAL FINDINGS

LEVEL AND SEX : 0 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	2) DAYS	BODY WEIGHT (G)		PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS	REFERENCE (APPENDIX NUMBER)
			INITIAL	FINAL		
1049	W	686	97.2	198.8	101.6	HISTIOCYTOSIS: MULTIPLE ORGANS
1050	W	499	102.0	296.4	194.4	BASAL CELL TUMOR: SKIN MONONUCLEAR CELL LEUKEMIA : MULTIPLE ORGANS
1051	W	733	96.1	258.6	162.5	MONONUCLEAR CELL LEUKEMIA : MULTIPLE ORGANS ADENOMA: MAMMARY GLAND
1052	Y	743	99.7	327.9	228.2	ADENOMA: PITUITARY GLAND PHEOCHROMOCYTOMA: ADRENAL GLANDS

1) FATE : W , KILLED IN EXTREMIS ; Y , KILLED ON SCHEDULE .
2) DAYS : AFTER START OF TREATMENT .

APPENDIX 10-F2-30
CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL MAJOR PATHOLOGICAL FINDINGS

LEVEL AND SEX : 10 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	2) DAYS	BODY WEIGHT (G)		PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS	REFERENCE (APPENDIX NUMBER)
			INITIAL	FINAL		
1101	Y	740	91.8	227.8	136.0	11-F2-1101
1102	Y	740	94.5	322.8	228.3	11-F2-1102
1103	Y	740	102.1	371.8	269.7	11-F2-1103
1104	Y	740	88.7	340.4	251.7	11-F2-1104
1105	W	722	103.4	262.5	159.1	11-F2-1105
1106	Y	740	95.4	334.3	238.9	11-F2-1106
1107	Y	740	94.0	352.8	258.8	11-F2-1107
1108	Y	740	102.8	385.2	282.4	11-F2-1108
1109	Y	740	102.8	485.1	382.3	11-F2-1109
1110	X	686	97.1	332.3	235.2	11-F2-1110
					ADENOMA: PITUITARY GLAND MONONUCLEAR CELL LEUKEMIA : MULTIPLE ORGANS	
1111	Y	740	99.1	338.8	239.7	11-F2-1111
1112	W	550	102.3	252.7	150.4	11-F2-1112
1113	Y	741	98.6	321.2	222.6	11-F2-1113
1114	Y	741	98.7	310.5	211.8	11-F2-1114
1115	Y	741	96.6	390.4	293.8	11-F2-1115
					ADENOMA: PITUITARY GLAND	

1) FATE : Y , KILLED ON SCHEDULE ; W , KILLED IN EXTREMIS ; X , FOUND DEAD .
2) DAYS : AFTER START OF TREATMENT .

APPENDIX 10-F2-31

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL MAJOR PATHOLOGICAL FINDINGS

LEVEL AND SEX : 10 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	2) DAYS	BODY WEIGHT (G)		PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS	REFERENCE (APPENDIX NUMBER)
			INITIAL	FINAL		
1116	Y	741	100.1	379.4	279.3	11-F2-1116
1117	Y	741	99.0	356.6	257.6	11-F2-1117
1118	Y	741	96.7	280.8	184.1	11-F2-1118
1119	W	561	98.1	282.8	184.7	11-F2-1119
					MONONUCLEAR CELL LEUKEMIA : MULTIPLE ORGANS	
1120	W	659	95.4	264.4	169.0	11-F2-1120
					MONONUCLEAR CELL LEUKEMIA : MULTIPLE ORGANS FIBROADENOMA: MAMMARY GLAND POLYP: UTERUS ADENOMA: PITUITARY GLAND	
1121	W	687	94.6	498.2	403.6	11-F2-1121
					ADENOMA: PITUITARY GLAND FIBROADENOMA: MAMMARY GLAND	
1122	W	676	97.3	267.7	170.4	11-F2-1122
					ADENOCARCINOMA: CLITORAL GLAND ADENOCARCINOMA: KIDNEYS	
1123	Y	741	91.2	328.3	237.1	11-F2-1123
1124	W	735	100.3	328.3	228.0	11-F2-1124
					MONONUCLEAR CELL LEUKEMIA : MULTIPLE ORGANS FIBROADENOMA: MAMMARY GLAND	
1125	Y	741	98.8	270.5	171.7	11-F2-1125

1) FATE : Y , KILLED ON SCHEDULE ; W , KILLED IN EXTREMIS .
 2) DAYS : AFTER START OF TREATMENT .

APPENDIX 10-F2-32

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL MAJOR PATHOLOGICAL FINDINGS

LEVEL AND SEX : 10 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	2) DAYS	BODY WEIGHT (G)		PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS	REFERENCE (APPENDIX NUMBER)
			INITIAL	FINAL		
1126	Y	741	100.1	367.2	267.1	11-F2-1126
1127	W	638	90.7	282.1	191.4	11-F2-1127
1128	Y	742	93.1	316.9	223.8	11-F2-1128
1129	W	659	91.6	256.2	164.6	11-F2-1129
1130	X	694	98.2	330.7	232.5	11-F2-1130
1131	Y	742	93.5	367.2	273.7	11-F2-1131
1132	Y	742	101.6	361.7	260.1	11-F2-1132
1133	Y	742	93.5	359.3	265.8	11-F2-1133
1134	W	680	92.6	225.1	132.5	11-F2-1134
1135	Y	742	99.6	364.7	265.1	11-F2-1135
1136	Y	742	88.4	319.3	230.9	11-F2-1136
1137	W	713	97.2	280.7	183.5	11-F2-1137
1138	Y	742	90.1	336.4	246.3	11-F2-1138

1) FATE : Y , KILLED ON SCHEDULE ; W , KILLED IN EXTREMIS ; X , FOUND DEAD .
2) DAYS : AFTER START OF TREATMENT .

APPENDIX 10-F2-33
CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT
INDIVIDUAL MAJOR PATHOLOGICAL FINDINGS

LEVEL AND SEX : 10 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	2) DAYS	BODY WEIGHT (G)		PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS	REFERENCE (APPENDIX NUMBER)
			INITIAL	FINAL		
1139	W	680	97.0	273.8	176.8 MONONUCLEAR CELL LEUKEMIA : MULTIPLE ORGANS	11-F2-1139
1140	W	721	96.6	270.8	174.2 MONONUCLEAR CELL LEUKEMIA : MULTIPLE ORGANS PAPILLARY ADENOMA : THYROID GLANDS	11-F2-1140
1141	W	666	101.5	279.5	178.0 MONONUCLEAR CELL LEUKEMIA : MULTIPLE ORGANS	11-F2-1141
1142	Y	742	92.6	335.3	242.7	11-F2-1142
1143	Y	743	101.8	341.3	239.5	11-F2-1143
1144	Y	743	93.8	324.9	231.1	11-F2-1144
1145	Y	743	95.1	339.7	244.6	11-F2-1145
1146	Y	743	94.6	359.6	265.0	11-F2-1146
1147	W	629	98.8	254.2	155.4 MONONUCLEAR CELL LEUKEMIA : MULTIPLE ORGANS	11-F2-1147
1148	Y	743	96.9	340.3	243.4	11-F2-1148
1149	Y	743	90.3	275.2	184.9	11-F2-1149
1150	W	631	92.7	236.6	143.9 ADENOMA: PITUITARY GLAND	11-F2-1150
1151	Y	743	101.0	340.9	239.9	11-F2-1151
1152	W	729	102.7	261.7	159.0 ADENOMA: PITUITARY GLAND	11-F2-1152

1) FATE : W , KILLED IN EXTREMIS ; Y , KILLED ON SCHEDULE .
2) DAYS : AFTER START OF TREATMENT .

APPENDIX 10-F2-34

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL MAJOR PATHOLOGICAL FINDINGS

LEVEL AND SEX : 10 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	2) DAYS	BODY WEIGHT (G)		PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS	REFERENCE (APPENDIX NUMBER)
			INITIAL	FINAL		
(CONTINUED)						
1152	W	729	102.7	261.7	159.0	11-F2-1152
					CALCULOSIS: URINARY BLADDER	

1) FATE : W, KILLED IN EXTREMIS.
2) DAYS : AFTER START OF TREATMENT.

APPENDIX 10-F3-35

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL MAJOR PATHOLOGICAL FINDINGS

LEVEL AND SEX : 100 PPM FEMALE									
ANIMAL NUMBER	1) FATE	2) DAYS	BODY WEIGHT (G)		PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS	STUDY NO. 83004 REFERENCE (APPENDIX NUMBER)			
			INITIAL	FINAL					
							GAIN		
1201	Y	740	98.1	331.3	233.2	11-F3-1201			
1202	W	657	100.0	265.7	165.7	11-F3-1202			
1203	Y	740	94.4	316.5	222.1	11-F3-1203			
1204	X	630	93.1	241.1	148.0	11-F3-1204			
1205	Y	740	102.9	379.4	276.5	11-F3-1205			
1206	Y	740	96.9	361.1	264.2	11-F3-1206			
1207	W	666	104.8	292.2	187.4	11-F3-1207			
1208	Y	740	93.1	314.5	221.4	11-F3-1208			
1209	W	658	100.5	266.1	165.6	11-F3-1209			
1210	Y	740	95.4	338.9	243.5	11-F3-1210			
1211	Y	740	106.1	350.3	244.2	11-F3-1211			
1) FATE : Y , KILLED ON SCHEDULE ; W , KILLED IN EXTREMIS ; X , FOUND DEAD .									
2) DAYS : AFTER START OF TREATMENT.									

1) FATE : Y , KILLED ON SCHEDULE ; W , KILLED IN EXTREMIS ; X , FOUND DEAD .
 2) DAYS : AFTER START OF TREATMENT.

APPENDIX 10-F3-36

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL MAJOR PATHOLOGICAL FINDINGS

STUDY NO. 83004						
LEVEL AND SEX :			100	PPM	FEMALE	
ANIMAL NUMBER	1) FATE	2) DAYS	BODY WEIGHT (G)		PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS	REFERENCE (APPENDIX NUMBER)
			INITIAL	FINAL		
1212	W	617	100.3	224.4	124.1	PAPILLARY ADENOMA : MAMMARY GLAND MESENCHYMOMA: KIDNEYS ADENOMA: PITUITARY GLAND ISLET-CELL ADENOMA : PANCREAS 11-F3-1212
1213	Y	740	92.3	329.7	237.4	11-F3-1213
1214	Y	740	81.9	317.5	235.6	11-F3-1214
1215	W	427	94.8	201.3	106.5	ADENOCARCINOMA: PITUITARY GLAND 11-F3-1215
1216	Y	741	92.7	290.5	197.8	11-F3-1216
1217	Y	741	92.6	313.8	221.2	11-F3-1217
1218	W	728	93.4	256.0	162.6	C-CELL CARCINOMA: THYROID GLANDS ADENOMA: PITUITARY GLAND FIBROADENOMA: MAMMARY GLAND 11-F3-1218
1219	Y	741	98.5	320.9	222.4	11-F3-1219
1220	Y	741	94.1	296.3	202.2	11-F3-1220
1221	W	560	95.4	247.5	152.1	MONONUCLEAR CELL LEUKEMIA : MULTIPLE ORGANS 11-F3-1221
1222	Y	741	97.8	319.4	221.6	11-F3-1222

1) FATE : W , KILLED IN EXTREMIS ; Y , KILLED ON SCHEDULE .
2) DAYS : AFTER START OF TREATMENT.

APPENDIX 10-F3-37

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL MAJOR PATHOLOGICAL FINDINGS

LEVEL AND SEX : 100 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	2) DAYS	BODY WEIGHT (G)		PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS	REFERENCE (APPENDIX NUMBER)
			INITIAL	FINAL		
1223	W	720	93.5	239.1	145.6 MONONUCLEAR CELL LEUKEMIA : MULTIPLE ORGANS POLYP: UTERUS C-CELL ADENOMA: THYROID GLANDS	11-F3-1223
1224	X	714	94.7	254.7	160.0 MONONUCLEAR CELL LEUKEMIA : MULTIPLE ORGANS POLYP: UTERUS	11-F3-1224
1225	W	718	93.9	285.6	191.7 MONONUCLEAR CELL LEUKEMIA : MULTIPLE ORGANS ADENOMA: PITUITARY GLAND ENDOMETRIAL STROMAL SARCOMA: UTERUS	11-F3-1225
1226	W	732	102.9	302.4	199.5 PHEOCHROMOCYTOMA: ADRENAL GLANDS CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY : KIDNEYS ULCER: STOMACH FIBROADENOMA: MAMMARY GLAND	11-F3-1226
1227	W	575	95.8	241.3	145.5 MEDULLOBLASTOMA: BRAIN ADENOMA: PITUITARY GLAND	11-F3-1227
1228	Y	741	104.5	333.3	228.8	11-F3-1228
1229	Y	741	106.3	344.3	238.0	11-F3-1229

1) FATE : W , KILLED IN EXTREMIS ; X , FOUND DEAD ; Y , KILLED ON SCHEDULE .
2) DAYS : AFTER START OF TREATMENT.

APPENDIX 10-F3-38

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL MAJOR PATHOLOGICAL FINDINGS

			LEVEL AND SEX :			100 PPM	FEMALE	STUDY NO. 83004	
ANIMAL NUMBER	1) FATE	2) DAYS	BODY WEIGHT (G)			PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS	REFERENCE (APPENDIX NUMBER)		
			INITIAL	FINAL	GAIN				
1230	W	607	92.6	220.9	128.3	MALIGNANT FIBROUS HISTIO- CYTOMA: PERITONEUM	11-F3-1230		
1231	Y	741	94.0	339.8	245.8		11-F3-1231		
1232	Y	741	99.9	322.6	222.7		11-F3-1232		
1233	X	546	93.5	246.6	153.1	MONONUCLEAR CELL LEUKEMIA : MULTIPLE ORGANS	11-F3-1233		
1234	Y	742	94.9	382.5	287.6		11-F3-1234		
1235	W	665	88.9	264.1	175.2	ADENOCARCINOMA: CLITORAL GLAND	11-F3-1235		
1236	W	727	100.6	283.0	182.4	PYOGENIC STOMATITIS : ORAL CAVITY	11-F3-1236		
1237	Y	742	92.9	315.2	222.3		11-F3-1237		
1238	Y	742	94.2	225.3	131.1		11-F3-1238		
1239	Y	742	101.2	364.9	263.7		11-F3-1239		
1240	Y	742	93.5	331.0	237.5		11-F3-1240		
1241	X	729	101.5	289.5	188.0	LEIOMYOSARCOMA: UTERUS MONONUCLEAR CELL LEUKEMIA : MULTIPLE ORGANS	11-F3-1241		
1242	Y	742	95.3	344.3	249.0		11-F3-1242		
1243	X	662	91.3	312.0	220.7	HEMANGIOMA: UTERUS	11-F3-1243		

1) FATE : W , KILLED IN EXTREMIS ; Y , KILLED ON SCHEDULE ; X , FOUND DEAD .

2) DAYS : AFTER START OF TREATMENT.

APPENDIX 10-F3-39

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL MAJOR PATHOLOGICAL FINDINGS

LEVEL AND SEX : 100 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	2) DAYS	BODY WEIGHT (G)		PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS	REFERENCE (APPENDIX NUMBER)
			INITIAL	FINAL		
1244	W	609	102.0	248.5	146.5	SQUAMOUS CELL CARCINOMA : SKIN 11-F3-1244
1245	Y	742	94.2	291.9	197.7	11-F3-1245
1246	Y	743	99.2	345.0	245.8	11-F3-1246
1247	Y	743	94.3	321.6	227.3	11-F3-1247
1248	Y	743	101.3	388.5	287.2	11-F3-1248
1249	X	742	109.4	329.9	220.5	MYELOCYTIC LEUKEMIA : MULTIPLE ORGANS 11-F3-1249
1250	Y	743	99.1	386.8	287.7	11-F3-1250
1251	Y	743	94.7	292.9	198.2	11-F3-1251
1252	Y	743	96.8	368.3	271.5	11-F3-1252

1) FATE : W , KILLED IN EXTREMIS ; Y , KILLED ON SCHEDULE ; X , FOUND DEAD .
 2) DAYS : AFTER START OF TREATMENT .

APPENDIX 10-F4-40

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL MAJOR PATHOLOGICAL FINDINGS

LEVEL AND SEX : 1000 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	2) DAYS	BODY WEIGHT (G)		PROBABLE CAUSE OF DEATH OR	MAJOR PATHOLOGICAL FINDINGS	REFERENCE
			INITIAL	FINAL			
1301	Y	740	94.2	329.4	235.2	NO SIGNIFICANT LESION	11-F4-1301
1302	X	621	94.0	302.6	208.6	SQUAMOUS CELL CARCINOMA : CLITORAL GLAND	11-F4-1302
1303	Y	740	100.7	326.1	225.4	NO SIGNIFICANT LESION	11-F4-1303
1304	Y	740	98.1	318.8	220.7	PHEOCHROMOCYTOMA: ADRENAL GLANDS	11-F4-1304
1305	W	690	99.8	211.5	111.7	ADENOCARCINOMA: CLITORAL GLAND MYELOCYTIC LEUKEMIA : MULTIPLE ORGANS ADENOMA: PITUITARY GLAND PAPILLARY ADENOMA: LUNG	11-F4-1305
1306	Y	740	96.7	357.9	261.2	NO SIGNIFICANT LESION	11-F4-1306
1307	Y	740	101.4	273.2	171.8	THYMOMA: THYMUS PHEOCHROMOCYTOMA: ADRENAL GLANDS C-CELL ADENOMA: THYROID GLANDS MONONUCLEAR CELL LEUKEMIA : MULTIPLE ORGANS	11-F4-1307
1308	W	722	102.2	409.8	307.6	FIBROADENOMA: MAMMARY GLAND C-CELL ADENOMA: THYROID GLANDS	11-F4-1308

1) FATE : Y , KILLED ON SCHEDULE ; X , FOUND DEAD ; W , KILLED IN EXTREMIS .
2) DAYS : AFTER START OF TREATMENT .

APPENDIX 10-F4-41
CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL MAJOR PATHOLOGICAL FINDINGS

LEVEL AND SEX : 1000 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	2) DAYS	BODY WEIGHT (G)		PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS	REFERENCE (APPENDIX NUMBER)
			INITIAL	FINAL		
(CONTINUED)						
1308	W	722	102.2	409.8	307.6 MONONUCLEAR CELL LEUKEMIA : MULTIPLE ORGANS	11-F4-1308
1309	W	732	104.8	304.0	199.2 FIBROADENOMA: MAMMARY GLAND MONONUCLEAR CELL LEUKEMIA : MULTIPLE ORGANS	11-F4-1309
1310	Y	740	99.9	354.1	254.2 FIBROADENOMA: MAMMARY GLAND	11-F4-1310
1311	W	671	92.7	305.6	212.9 FIBROADENOMA: MAMMARY GLAND ENDOMETRIAL STROMAL SARCOMA: UTERUS	11-F4-1311
1312	W	652	100.7	283.7	183.0 LIPOMA: SKIN (SUBCUTIS) MESENCHYMOMA: SKIN (SUBCUTIS) MESENCHYMOMA: PERITONEUM MESENCHYMOMA: VAGINA	11-F4-1312
1313	Y	740	94.2	319.6	225.4 ADENOMA: PITUITARY GLAND PHEOCHROMOCYTOMA: ADRENAL GLANDS	11-F4-1313
1314	Y	740	97.4	269.4	172.0 MONONUCLEAR CELL LEUKEMIA : MULTIPLE ORGANS	11-F4-1314
1315	X	719	98.7	307.1	208.4 MONONUCLEAR CELL LEUKEMIA : MULTIPLE ORGANS	11-F4-1315
1316	Y	740	88.3	275.8	187.5 POLYP: UTERUS	11-F4-1316

1) FATE : W / KILLED IN EXTREMIS ; Y / KILLED ON SCHEDULE ; X / FOUND DEAD .
2) DAYS : AFTER START OF TREATMENT .

APPENDIX 10-F4-42

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL MAJOR PATHOLOGICAL FINDINGS

LEVEL AND SEX : 1000 PPM FEMALE

ANIMAL NUMBER	1) FATE	2) DAYS	BODY WEIGHT (G)		PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS	REFERENCE (APPENDIX NUMBER)
			INITIAL	FINAL		
1317	Y	741	93.0	285.6	192.6	POLYP: UTERUS 11-F4-1317
1318	W	632	105.5	345.2	239.7	ENDOMETRIAL STROMAL SARCOMA: UTERUS C-CELL ADENOMA: THYROID GLANDS 11-F4-1318
1319	W	735	102.1	256.8	154.7	MYELOCYTIC LEUKEMIA : MULTIPLE ORGANS ADENOMA: PITUITARY GLAND 11-F4-1319
1320	Y	741	91.4	310.2	218.8	NO SIGNIFICANT LESION 11-F4-1320
1321	Y	741	95.5	327.7	232.2	ADENOCARCINOMA: CLITORAL GLAND 11-F4-1321
1322	Y	741	103.1	357.9	254.8	FIBROMA: SKIN (SUBCUTIS) ADENOMA: PITUITARY GLAND MONONUCLEAR CELL LEUKEMIA : MULTIPLE ORGANS 11-F4-1322
1323	Y	741	93.8	297.6	203.8	NO SIGNIFICANT LESION 11-F4-1323
1324	Y	741	93.1	325.6	232.5	ADENOMA: PITUITARY GLAND MONONUCLEAR CELL LEUKEMIA : MULTIPLE ORGANS 11-F4-1324
1325	W	683	89.0	243.5	154.5	ADENOMA: MAMMARY GLAND RHABDOMYOSARCOMA : MUSCLE (Q. FEMORIS) 11-F4-1325

1) FATE : Y , KILLED ON SCHEDULE ; W , KILLED IN EXTREMIS .
 2) DAYS : AFTER START OF TREATMENT .

APPENDIX 10-F4-43

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL MAJOR PATHOLOGICAL FINDINGS

LEVEL AND SEX : 1000 PPM FEMALE						STUDY NO. 83004	
ANIMAL NUMBER	1) FATE	2) DAYS	BODY WEIGHT (G)		PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS	REFERENCE (APPENDIX NUMBER)	
			INITIAL	FINAL			
1326	Y	741	91.1	308.4	217.3	ADENOCARCINOMA: CLITORAL GLAND ADENOMA: PITUITARY GLAND MONONUCLEAR CELL LEUKEMIA : MULTIPLE ORGANS	11-F4-1326
1327	Y	741	91.2	328.1	236.9	ADENOCARCINOMA: CLITORAL GLAND POLYP: UTERUS	11-F4-1327
1328	W	736	91.3	289.4	198.1	ADENOMA: PITUITARY GLAND FIBROADENOMA: MAMMARY GLAND	11-F4-1328
1329	X	718	98.2	328.0	229.8	FIBROADENOMA: MAMMARY GLAND HEMORRHAGE: BRAIN	11-F4-1329
1330	Y	741	103.0	384.7	281.7	MONONUCLEAR CELL LEUKEMIA : MULTIPLE ORGANS ADENOMA: PITUITARY GLAND	11-F4-1330
1331	Y	741	93.8	363.7	269.9	ADENOMA: PITUITARY GLAND	11-F4-1331
1332	Y	741	89.7	369.8	280.1	ISLET-CELL ADENOMA : PANCREAS ADENOMA: PITUITARY GLAND	11-F4-1332 ^a
1333	W	736	98.0	283.2	185.2	PHEOCHROMOCYTOMA: ADRENAL GLANDS PAPILLARY ADENOMA: LUNG SARCOMA: PERITONEUM	11-F4-1333

1) FATE : Y / KILLED ON SCHEDULE ; W / KILLED IN EXTREMIS ; X / FOUND DEAD .
 2) DAYS : AFTER START OF TREATMENT.

APPENDIX 10-F4-44
CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT
INDIVIDUAL MAJOR PATHOLOGICAL FINDINGS

LEVEL AND SEX : 1000 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	2) DAYS	BODY WEIGHT (G)		PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS	REFERENCE (APPENDIX NUMBER)
			INITIAL	FINAL GAIN		
1334	Y	742	92.2	342.1 249.9	NO SIGNIFICANT LESION	11-F4-1334
1335	W	728	96.9	251.9 155.0	ADENOMA: PITUITARY GLAND ISLET-CELL ADENOMA : PANCREAS	11-F4-1335
1336	Y	742	92.5	305.3 212.8	ADENOMA: PITUITARY GLAND C-CELL ADENOMA: THYROID GLANDS POLYP: UTERUS	11-F4-1336
1337	W	694	96.7	327.4 230.7	POLYP: UTERUS ADENOMA: PITUITARY GLAND	11-F4-1337
1338	Y	742	93.0	311.1 218.1	MONONUCLEAR CELL LEUKEMIA : MULTIPLE ORGANS ADENOMA: PITUITARY GLAND	11-F4-1338
1339	Y	742	95.4	337.6 242.2	PHEOCHROMOCYTOMA: ADRENAL GLANDS POLYP: VAGINA ADENOMA: PITUITARY GLAND	11-F4-1339
1340	Y	742	97.6	316.7 219.1	PHEOCHROMOCYTOMA: ADRENAL GLANDS	11-F4-1340
1341	Y	742	96.4	379.0 282.6	NO SIGNIFICANT LESION	11-F4-1341
1342	X	658	89.7	273.3 183.6	MONONUCLEAR CELL LEUKEMIA : MULTIPLE ORGANS	11-F4-1342
1343	Y	742	98.3	319.1 220.8	ADENOMA: PITUITARY GLAND	11-F4-1343

1) FATE : Y , KILLED ON SCHEDULE ; W , KILLED IN EXTREMIS ; X , FOUND DEAD .
2) DAYS : AFTER START OF TREATMENT .

APPENDIX 10-F4-45

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL MAJOR PATHOLOGICAL FINDINGS

LEVEL AND SEX : 1000 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	2) DAYS	BODY WEIGHT (G)		PROBABLE CAUSE OF DEATH OR	MAJOR PATHOLOGICAL FINDINGS	REFERENCE (APPENDIX NUMBER)
			INITIAL	FINAL			
1344	W	718	97.1	273.5	176.4	ISLET-CELL ADENOMA : PANCREAS MONONUCLEAR CELL LEUKEMIA : MULTIPLE ORGANS GRANULOSA-THECA CELL TUMOR: OVARIES FIBROMA: UTERUS ADENOMA: PITUITARY GLAND	11-F4-1344
1345	Y	743	90.3	320.9	230.6	POLYP: UTERUS ADENOMA: MAMMARY GLAND	11-F4-1345
1346	Y	743	98.7	302.6	203.9	ADENOMA: PITUITARY GLAND	11-F4-1346
1347	Y	743	94.6	357.0	262.4	MALIGNANT LYMPHOMA : SPLEEN	11-F4-1347
1348	Y	743	96.1	293.1	197.0	PHEOCHROMOCYTOMA: ADRENAL GLANDS C-CELL ADENOMA: THYROID GLANDS	11-F4-1348
1349	Y	743	100.6	309.1	208.5	GLIOSIS: BRAIN	11-F4-1349
1350	Y	743	95.4	338.2	242.8	NO SIGNIFICANT LESION	11-F4-1350
1351	Y	743	98.9	385.2	286.3	NO SIGNIFICANT LESION	11-F4-1351
1352	Y	743	99.8	307.5	207.7	LEIOMYOMA: UTERUS CHORDOMA: VERTEBRA	11-F4-1352

1) FATE : W, KILLED IN EXTREMIS ; Y, KILLED ON SCHEDULE .
2) DAYS : AFTER START OF TREATMENT.

APPENDIX 11-F1-1001

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 0 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1001	Y	740	HEART			FIBROSIS	+	NO SIGNIFICANT LESION
			THYMUS			HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	+	
			LYMPH NODES (PULM. HILUS) SPLEEN			BLOOD ABSORPTION	+	
						HEMOSIDEROSIS	++	
						EXTRAMEDULLARY HEMATOPOIESIS	+	
			NASAL CAVITY			INFILTRATION OF LEUCOCYTES CALCIFICATION	+	
						INFILTRATION OF LEUCOCYTES	+	
			LARYNGOPHARYNX			INFILTRATION OF LEUCOCYTES HYPERSECRETION	+	
			LUNG			INFILTRATION OF LEUCOCYTES CALCIFICATION OF VASCULAR WALL	+	
			STOMACH			CYST	+	
			LIVER			FOCAL ATROPHY OF HEPATIC CELLS FATTY DEGENERATION OF HEPATIC CELLS SMALL GRANULOMA PROLIFERATION OF BILE DUCT	+	
			PANCREAS			REGENERATIVE CHANGE	+	
			KIDNEYS			PIGMENTATION (BILATERAL)	++	

1) FATE : Y , KILLED ON SCHEDULE 2) GRADE : NEGATIVE NOT PRESENTED 3) GRADE OF MASS :
+ , SLIGHT A , SMALL AND/OR SINGULAR
++ , MODERATE B , MEDIAL AND/OR SPORADIC
+++ , SEVERE C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F1-1001 CONTINUED

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 0 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1001	Y	740	KIDNEYS			CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) INFILTRATION OF LEUCOCYTES (BILATERAL) CALCIFICATION (BILATERAL)	++ + +	
			ADRENAL GLANDS			INFILTRATION OF LEUCOCYTES (UNILATERAL)	+	
			EYE BALLS	GRAYISH CHANGE (UNILATERAL)	+	RETINAL ATROPHY (UNILATERAL) CATARACT (UNILATERAL)	+ +	
			BRAIN			PIGMENTATION	+	
			SPINAL CORD			PIGMENTATION	+	
			OPTIC NERVE			EDEMA (UNILATERAL)	+	

1) FATE : Y , KILLED ON SCHEDULE 2) GRADE : NEGATIVE NOT PRESENTED 3) GRADE OF MASS :
+ , SLIGHT A , SMALL AND/OR SINGULAR
++ , MODERATE B , MEDIAL AND/OR SPORADIC
+++ , SEVERE C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F1-1002

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 0 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1002	Y	740	HEART			FIBROSIS	+	ADENOMA: PITUITARY GLAND
			THYMUS			HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	+	POLYP: UTERUS ADENOCARCINOMA: CLITORAL GLAND
			LYMPH NODES (PULM.HILUS) SPLEEN			BLOOD ABSORPTION	+	
			ENLARGEMENT		++	EXTRAMEDULLARY HEMATOPOIESIS	++	
			BONE MARROW			ACTIVATION OF HEMATOPOIESIS	++	
			NASAL CAVITY			INFILTRATION OF LEUCOCYTES	+	
			LARYNGOPHARYNX			INFILTRATION OF LEUCOCYTES	+	
			SUBLINGUAL GLANDS			INFILTRATION OF LEUCOCYTES (UNILATERAL)	+	
			PAROTID GLANDS			REGENERATIVE CHANGE (BILATERAL)	++	
			LIVER		+++	INFILTRATION OF LEUCOCYTES SMALL GRANULOMA FOCAL ATROPHY OF HEPATIC CELLS FATTY DEGENERATION OF HEPATIC CELLS	+	
			KIDNEYS			CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL)	+	

1) FATE : Y , KILLED ON SCHEDULE

2) GRADE : NEGATIVE NOT PRESENTED

3) GRADE OF MASS :

A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

+ , SLIGHT
++ , MODERATE
+++ , SEVERE

APPENDIX 11-F1-1002 CONTINUED
CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 0 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1002	Y	740	KIDNEYS					
			UTERUS	ENLARGEMENT	+	INFILTRATION OF LEUCOCYTES (BILATERAL) PIGMENTATION (BILATERAL) CALCIFICATION (BILATERAL)	+	
			CLITORAL GLAND	MASS	C	POLYP PIGMENTATION INFILTRATION OF LEUCOCYTES	+	
			PITUITARY GLAND	HEMORRHAGE	+	ADENOCARCINOMA ADENOMA	+	
			THYROID GLANDS			HYPERPLASIA OF C-CELLS (UNILATERAL)	+	
			ADRENAL GLANDS			INFILTRATION OF LEUCOCYTES (UNILATERAL)	+	
			MAMMARY GLAND			HYPERPLASIA	+	
			BRAIN			PIGMENTATION	+	
			SPINAL CORD			PIGMENTATION	+	

1) FATE : Y / KILLED ON SCHEDULE 2) GRADE : NEGATIVE NOT PRESENTED 3) GRADE OF MASS :
+ , SLIGHT A , SMALL AND/OR SINGULAR
++ , MODERATE B , MEDIAL AND/OR SPORADIC
+++ , SEVERE C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F1-1003

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 0 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE DAYS	4) ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1003	Y	740	HEART		FIBROSIS	+	PAPILLARY ADENOMA: LUNG
			THYMUS		HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	+	ADENOMA: PITUITARY GLAND SQAMOUS CELL PAPILLOMA : SKIN
			LYMPH NODES (PULM.HILUS) SPLEEN		BLOOD ABSORPTION	+	C-CELL ADENOMA: THYROID GLANDS
			ENLARGEMENT	+	EXTRAMEDULLARY HEMATOPOIESIS HEMOSIDEROSIS	++ +	
			NASAL CAVITY		INFILTRATION OF LEUCOCYTES	++	
			LUNG	+	PAPILLARY ADENOMA CALCIFICATION OF VASCULAR WALL	+	
			STOMACH		INFILTRATION OF LEUCOCYTES	+	
			PAROTID GLANDS		DILATATION OF DUCT (UNILATERAL) REGENERATIVE CHANGE (UNILATERAL)	+	
			LIVER	+	ANGIECTASIA SMALL GRANULOMA INFILTRATION OF LEUCOCYTES MACROPHAGE MIGRATION IN PERIVASCULAR AREA FATTY DEGENERATION OF HEPATIC CELLS	++ ++ ++ +	

1) FATE : Y , KILLED ON SCHEDULE

2) GRADE : NEGATIVE NOT PRESENTED

3) GRADE OF MASS :

A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

+ , SLIGHT
++ , MODERATE
+++ , SEVERE

APPENDIX 11-F1-1003 CONTINUED
CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 0 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1003	Y	740	LIVER					
			PANCREAS			CHOLANGIOFIBROSIS FOCAL ATROPHY OF HEPATIC CELLS FOCAL NECROSIS	+	
			KIDNEYS			INFILTRATION OF LEUCOCYTES	+	
			UTERUS			CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) PIGMENTATION (BILATERAL) INFILTRATION OF LEUCOCYTES (BILATERAL) CALCIFICATION (BILATERAL) PIGMENTATION	++ ++ + + +	
			PITUITARY GLAND	ENLARGEMENT HEMORRHAGE	+	ADENOMA	+	
			THYROID GLANDS	ENLARGEMENT (UNILATERAL)	+	C-CELL ADENOMA (UNILATERAL) HYPERPLASIA OF C-CELLS (UNILATERAL)	+	
			ADRENAL GLANDS			HYPERPLASIA OF MEDULLARY CELLS (UNILATERAL)	+	
			SKIN	NODULE	+	SQUAMOUS CELL PAPILLOMA INFILTRATION OF LEUCOCYTES	+	
			HARDERIAN GLANDS			INFILTRATION OF LEUCOCYTES (BILATERAL)	+	

1) FATE : Y , KILLED ON SCHEDULE

2) GRADE : NEGATIVE NOT PRESENTED
+ , SLIGHT
++ , MODERATE
+++ , SEVERE

3) GRADE OF MASS :

A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F1-1003 CONTINUED
 CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
 OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 0 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1003	Y	740	BRAIN			PIGMENTATION	+	
			SPINAL CORD			PIGMENTATION	+	

1) FATE : Y , KILLED ON SCHEDULE 2) GRADE : NEGATIVE NOT PRESENTED 3) GRADE OF MASS :
 + , SLIGHT A , SMALL AND/OR SINGULAR
 ++ , MODERATE B , MEDIAL AND/OR SPORADIC
 +++ , SEVERE C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F1-1004

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 0 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	2) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1004	W	616	HEART			FIBROSIS	+	ADENOMA: PITUITARY GLAND
			SPLEEN			HEMOSIDEROSIS EXTRAMEDULLARY HEMATOPOIESIS	++ +	
			NASAL CAVITY			INFILTRATION OF LEUCOCYTES	+	
			LUNG			CALCIFICATION OF VASCULAR WALL	+	
			PAROTID GLANDS			REGENERATIVE CHANGE (UNILATERAL)	+	
			LIVER	YELLOWISH CHANGE	++	FATTY DEGENERATION OF HEPATIC CELLS INFILTRATION OF LEUCOCYTES SMALL GRANULOMA MACROPHAGE MIGRATION IN PERIVASCULAR AREA	++ + ++ +	
			PANCREAS			INFILTRATION OF LEUCOCYTES	+	
			KIDNEYS	ROUGHNESS OF SURFACE (BILATERAL)	+	CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) PIGMENTATION (BILATERAL) INFILTRATION OF LEUCOCYTES (BILATERAL) CALCIFICATION (BILATERAL)	+++ ++ + +	
			OVARIES			ATROPHY (BILATERAL)	+	
			UTERUS			PIGMENTATION	+	

1) FATE : W , KILLED IN EXTREMIS 2) GRADE : NEGATIVE NOT PRESENTED 3) GRADE OF MASS :
 + , SLIGHT A , SMALL AND/OR SINGULAR
 ++ , MODERATE B , MEDIAL AND/OR SPORADIC
 +++ , SEVERE C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F1-1004 CONTINUED

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 0 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1004	W	616	VAGINA			ATROPHY	++	
			PITUITARY GLAND	MASS HEMORRHAGE	A +	ADENOMA		
			ADRENAL GLANDS			VACUOLAR DEGENERATION OF CORTICAL CELLS (UNILATERAL)	+	
			MAMMARY GLAND			HYPERPLASIA	+	
			BRAIN	IMPRESSION	++			

1) FATE : W , KILLED IN EXTREMIS

2) GRADE : NEGATIVE NOT PRESENTED

3) GRADE OF MASS :

A , SMALL AND/OR SINGULAR

B , MEDIAL AND/OR SPORADIC

C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

++ , SLIGHT

+++ , MODERATE

+++ , SEVERE

APPENDIX 11-f1-1005
CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 0 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1005	W	691	HEART			INFILTRATION OF LEUCOCYTES	+	ADENOCARCINOMA: CLITORAL GLAND
			THYMUS			HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	+	ADENOMA: PITUITARY GLAND
			LYMPH NODES (SUBMAXI.)			BLOOD ABSORPTION	+	
			LYMPH NODES (PULM.-HILUS)			BLOOD ABSORPTION	+	
			SPLEEN			HEMOSIDEROSIS EXTRAMEDULLARY HEMATOPOIESIS	+	
			BONE MARROW			MIGRATION OF HEMOSIDERIN-LADEN CELLS	++	
			NASAL CAVITY			INFILTRATION OF LEUCOCYTES	+	
			LARYNGOPHARYNX			INFILTRATION OF LEUCOCYTES	+	
			LUNG			INFILTRATION OF LEUCOCYTES CALCIFICATION OF VASCULAR WALL ADENOMATOSIS HISTIOCYTOSIS	++ + + +	
			LIVER			SMALL GRANULOMA FATTY DEGENERATION OF HEPATIC CELLS INFILTRATION OF LEUCOCYTES	++ ++ ++	
			KIDNEYS			CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL)	++	

1) FATE : W , KILLED IN EXTREMIS
2) GRADE : NEGATIVE NOT PRESENTED
+ , SLIGHT
++ , MODERATE
+++ , SEVERE
3) GRADE OF MASS :
A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE
4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F1-1005 CONTINUED
CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 0 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1005	W	691	KIDNEYS					
			UTERUS	ENLARGEMENT	+	PIGMENTATION (BILATERAL) CALCIFICATION (BILATERAL) INFILTRATION OF LEUCOCYTES (BILATERAL)	++ + +	
			VAGINA			PIGMENTATION	+	
			CLITORAL GLAND	MASS	A	INFILTRATION OF LEUCOCYTES	+	
			PITUITARY GLAND	ENLARGEMENT HEMORRHAGE	+++ ++	ADENOMA		
			THYROID GLANDS			HYPERPLASIA OF C-CELLS (UNILATERAL)	+	
			ADRENAL GLANDS			VACUOLAR DEGENERATION OF CORTICAL CELLS (UNILATERAL) HEMORRHAGE (UNILATERAL)	++ +	
			SKIN			EPIDERMOID CYST INFILTRATION OF LEUCOCYTES	+	
			MAMMARY GLAND	MASS	A	HYPERPLASIA	+++	
			EYE BALLS			CALCIFICATION, SCLERA (UNILATERAL)	+	
			HARDERIAN GLANDS			HYPERSECRETION (BILATERAL)	+	
			BRAIN	IMPRESSION	+	MIGRATION OF HEMOSIDERIN-LADEN	+	

1) FATE : W , KILLED IN EXTREMIS				2) GRADE : NEGATIVE NOT PRESENTED + , SLIGHT ++ , MODERATE +++ , SEVERE		3) GRADE OF MASS : A , SMALL AND/OR SINGULAR B , MEDIAL AND/OR SPORADIC C , LARGE AND/OR MULTIPLE		
4) DAYS : AFTER START OF TREATMENT								

APPENDIX 11-F1-1005 CONTINUED
 CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
 OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 0 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1005	W	691	BRAIN			CELLS HEMORRHAGE DILATATION OF CEREBRAL VENTRICLE PIGMENTATION	+	
			SPINAL CORD			PIGMENTATION	+	

1) FATE : W , KILLED IN EXTREMIS
 2) GRADE : NEGATIVE NOT PRESENTED
 3) GRADE OF MASS :
 A , SMALL AND/OR SINGULAR
 B , MEDIAL AND/OR SPORADIC
 C , LARGE AND/OR MULTIPLE
 4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F1-1006
CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 0 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1006	W	616	HEART			FIBROSIS	+	ADENOMA: PITUITARY GLAND
			THYMUS			HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	+	
			LYMPH NODES (PULM.HILUS) SPLEEN			BLOOD ABSORPTION	+	
						Hemosiderosis	++	
			NASAL CAVITY			INFILTRATION OF LEUCOCYTES	+	
			TRACHEA			HYPERSECRETION	+	
			LUNG			INFILTRATION OF LEUCOCYTES	+	
			PAROTID GLANDS			DILATATION OF DUCT (BILATERAL)	++	
			LIVER			FATTY DEGENERATION OF HEPATIC CELLS SMALL GRANULOMA INFILTRATION OF LEUCOCYTES	++ ++ +	
			KIDNEYS			CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) INFILTRATION OF LEUCOCYTES (BILATERAL)	++ ++ +	
						PIGMENTATION (BILATERAL) CALCIFICATION (BILATERAL)	++ +	
			OVARIES			ATROPHY (BILATERAL)	+	

1) FATE : W , KILLED IN EXTREMIS

2) GRADE : NEGATIVE NOT PRESENTED

3) GRADE OF MASS :

A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

+ , SLIGHT
++ , MODERATE
+++ , SEVERE

APPENDIX 11-F1-1006 CONTINUED
CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 0 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1006	W	616	UTERUS			PIGMENTATION	+	
			VAGINA			INFILTRATION OF LEUCOCYTES	+	
			PITUITARY GLAND	ENLARGEMENT HEMORRHAGE	+++ ++	ADENOMA		
			ADRENAL GLANDS			VACUOLAR DEGENERATION OF CORTICAL CELLS (UNILATERAL)	+	
			MAMMARY GLAND			HYPERPLASIA	++	
			BRAIN	IMPRESSION	+	PIGMENTATION HEMORRHAGE MIGRATION OF HEMOSIDERIN-LADEN CELLS	+	
						DILATATION OF CEREBRAL VENTRICLE	++	
			SPINAL CORD			PIGMENTATION	+	

1) FATE : W , KILLED IN EXTREMIS
2) GRADE : NEGATIVE NOT PRESENTED
+ , SLIGHT
++ , MODERATE
+++ , SEVERE
3) GRADE OF MASS :
A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE
4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F1-1007

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 0 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1007	W	596	THYMUS			HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	+	NO SIGNIFICANT LESION
			LYMPH NODES (PULM.HILUS) SPLEEN			BLOOD ABSORPTION	+	
						EXTRAMEDULLARY HEMATOPOIESIS HEMOSIDEROSIS	++	
			NASAL CAVITY			OSTEOSCLEROSIS GRANULATION INFILTRATION OF LEUCOCYTES	++ ++ +	
			LUNG			OSSEOUS TISSUE INFILTRATION OF LEUCOCYTES CALCIFICATION OF VASCULAR WALL	++ ++ +	
			LIVER			FATTY DEGENERATION OF HEPATIC CELLS SMALL GRANULOMA CHOLANGIOFIBROSIS MACROPHAGE MIGRATION IN PERIVASCULAR AREA FOCAL ATROPHY OF HEPATIC CELLS	++ ++ ++ ++ ++ +	
			KIDNEYS			CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) INFILTRATION OF LEUCOCYTES (BILATERAL) CALCIFICATION (BILATERAL)	++ ++ ++ +	

1) FATE : W , KILLED IN EXTREMIS

2) GRADE : NEGATIVE NOT PRESENTED

3) GRADE OF MASS :

A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

+ , SLIGHT
++ , MODERATE
+++ , SEVERE

APPENDIX 11-F1-1007 CONTINUED
CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 0 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1007	W	596	KIDNEYS			PIGMENTATION (BILATERAL)	+	
			UTERUS			DILATATION OF DUCT	+	
			PARATHYROID GLANDS			HYPERPLASIA OF CHIEF CELLS (UNILATERAL)	++	
			BONE (FEMUR)			OSTEOSCLEROSIS	++	
			MUSCLE (Q. FEMORIS)			ATROPHY	++	
			HARDERIAN GLANDS			INFILTRATION OF LEUCOCYTES (BILATERAL)	+	
			BRAIN			PIGMENTATION	+	
			SPINAL CORD			PIGMENTATION	+	
			SCIATIC NERVE			DEMYELINIZATION	++	

1) FATE : W , KILLED IN EXTREMIS
2) GRADE : NEGATIVE NOT PRESENTED
+ , SLIGHT
++ , MODERATE
+++ , SEVERE
3) GRADE OF MASS :
A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE
4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F1-1008

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 0 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1008	Y	740	HEART			FIBROSIS	+	CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY
			THYMUS			HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	++	: KIDNEYS
			LYMPH NODES (PULM.HILUS)			BLOOD ABSORPTION ATROPHY	++ +	ADENOMA: PITUITARY GLAND
			SPLEEN			HEMOSIDEROSIS EXTRAMEDULLARY HEMATOPOIESIS	++ +	
			NASAL CAVITY			INFILTRATION OF LEUCOCYTES	+	
			LARYNGOPHARYNX			INFILTRATION OF LEUCOCYTES HYPERSECRETION	++ ++	
			LIVER			FATTY DEGENERATION OF HEPATIC CELLS SMALL GRANULOMA CHOLANGIOFIBROSIS FOCAL ATROPHY OF HEPATIC CELLS	++ + + +	
			KIDNEYS	ROUGHNESS OF SURFACE (BILATERAL)	++	CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) PIGMENTATION (BILATERAL) INFILTRATION OF LEUCOCYTES (BILATERAL) CALCIFICATION (BILATERAL)	+++ ++ + +	
			UTERUS			PIGMENTATION	+	
			PITUITARY GLAND	ENLARGEMENT	++	ADENOMA		

1) FATE : Y , KILLED ON SCHEDULE				2) GRADE : NEGATIVE NOT PRESENTED		3) GRADE OF MASS :		
				+ , SLIGHT		A , SMALL AND/OR SINGULAR		
				++ , MODERATE		B , MEDIAL AND/OR SPORADIC		
				+++ , SEVERE		C , LARGE AND/OR MULTIPLE		

4) DAYS : AFTER START OF TREATMENT								

APPENDIX 11-F1-1008 CONTINUED
CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 0 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1008	Y	740	PITUITARY GLAND	HEMORRHAGE	+			
			THYROID GLANDS			HYPERPLASIA OF C-CELLS (BILATERAL)	+	
			ADRENAL GLANDS			ANGIECTASIA (UNILATERAL) PIGMENTATION (UNILATERAL)	+	
			MAMMARY GLAND			HYPERPLASIA	+	
			HARDERIAN GLANDS			INFILTRATION OF LEUCOCYTES (UNILATERAL)	+	
			BRAIN	IMPRESSION	+	PIGMENTATION	+	
			SPINAL CORD			PIGMENTATION	+	

1) FATE : Y , KILLED ON SCHEDULE 2) GRADE : NEGATIVE NOT PRESENTED 3) GRADE OF MASS :
+ , SLIGHT A , SMALL AND/OR SINGULAR
++ , MODERATE B , MEDIAL AND/OR SPORADIC
+++ , SEVERE C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F1-1009
CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 0 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1009	Y	740	HEART			INFILTRATION OF LEUCOCYTES FIBROSIS	+	ADENOMA: PITUITARY GLAND
			THYMUS			HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	+	
			LYMPH NODES (MESENT.) SPLEEN			ANGIECTASIA	++	
						HEMOSIDEROSIS EXTRAMEDULLARY HEMATOPOIESIS	+++ +	
			NASAL CAVITY			INFILTRATION OF LEUCOCYTES	+	
			LARYNGOPHARYNX			HYPERSECRETION	+	
			TRACHEA			INFILTRATION OF LEUCOCYTES	+	
			LUNG			OSSEOUS TISSUE INFILTRATION OF LEUCOCYTES CALCIFICATION OF VASCULAR WALL	++ ++ +	
			PAROTID GLANDS			INFILTRATION OF LEUCOCYTES (UNILATERAL) REGENERATIVE CHANGE (UNILATERAL)	++ +	
			LIVER			INFILTRATION OF LEUCOCYTES FATTY DEGENERATION OF HEPATIC CELLS	++ +	

1) FATE : Y , KILLED ON SCHEDULE
4) DAYS : AFTER START OF TREATMENT

2) GRADE : NEGATIVE NOT PRESENTED
+ , SLIGHT
++ , MODERATE
+++ , SEVERE

3) GRADE OF MASS :
A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE

APPENDIX 11-F1-1009 CONTINUED
CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 0 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1009	Y	740	LIVER			SMALL GRANULOMA MACROPHAGE MIGRATION IN PERIVASCULAR AREA FOCAL ATROPHY OF HEPATIC CELLS PROLIFERATION OF BILE DUCT	++ + + +	
			KIDNEYS			CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) PIGMENTATION (BILATERAL) CALCIFICATION (BILATERAL) INFILTRATION OF LEUCOCYTES (BILATERAL)	++ ++ + +	
			UTERUS			PIGMENTATION	+	
			PITUITARY GLAND	MASS HEMORRHAGE	A ++	ADENOMA		
			ADRENAL GLANDS			VACUOLAR DEGENERATION OF CORTICAL CELLS (UNILATERAL) INFILTRATION OF LEUCOCYTES (BILATERAL)	+ +	
			HARDERIAN GLANDS			INFILTRATION OF LEUCOCYTES (UNILATERAL)	+	
			BRAIN	IMPRESSION	++	MIGRATION OF HEMOSIDERIN-LADEN CELLS	+	

1) FATE : Y , KILLED ON SCHEDULE 2) GRADE : NEGATIVE NOT PRESENTED 3) GRADE OF MASS :
+ , SLIGHT A , SMALL AND/OR SINGULAR
++ , MODERATE B , MEDIAL AND/OR SPORADIC
+++ , SEVERE C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F1-1009 CONTINUED
CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 0 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
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1009 Y 740 BRAIN

PIGMENTATION +
DILATATION OF CEREBRAL VENTRICLE +
PIGMENTATION +

SPINAL CORD

1) FATE : Y , KILLED ON SCHEDULE	2) GRADE : NEGATIVE NOT PRESENTED + , SLIGHT ++ , MODERATE +++ , SEVERE	3) GRADE OF MASS : A , SMALL AND/OR SINGULAR B , MEDIAL AND/OR SPORADIC C , LARGE AND/OR MULTIPLE
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4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F1-1010

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 0 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1010	Y	740	HEART			FIBROSIS	+	POLYP: UTERUS
			THYMUS			INFILTRATION OF LEUCOCYTES	+	C-CELL ADENOMA: THYROID GLANDS
			LYMPH NODES (PULM.HILUS) SPLEEN			HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	+	
			NASAL CAVITY			BLOOD ABSORPTION	++	
			LUNG			HEMOSIDEROSIS	++	
			STOMACH			EXTRAMEDULLARY HEMATOPOIESIS	+	
			LIVER			INFILTRATION OF LEUCOCYTES	+	
						INFILTRATION OF LEUCOCYTES HEMORRHAGE	+	
						INFILTRATION OF LEUCOCYTES	+	
						ANGIECTASIA	+	
						FATTY DEGENERATION OF HEPATIC CELLS	+	
						INFILTRATION OF LEUCOCYTES	+	
						HEMORRHAGE	+	
						FOCAL ATROPHY OF HEPATIC CELLS	+	
						SMALL GRANULOMA	+	
						MACROPHAGE MIGRATION	+	
						IN PERIVASCULAR AREA	+	
						PROLIFERATION OF BILE DUCT	+	
						THICKENING OF CAPSULE	+	
						CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL)	+	

1) FATE : Y , KILLED ON SCHEDULE 2) GRADE : NEGATIVE NOT PRESENTED 3) GRADE OF MASS :
+ , SLIGHT A , SMALL AND/OR SINGULAR
++ , MODERATE B , MEDIAL AND/OR SPORADIC
+++ , SEVERE C , LARGE AND/OR MULTIPLE

APPENDIX 11-F1-1010 CONTINUED
CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 0 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1010	Y	740	KIDNEYS					
			UTERUS	ENLARGEMENT	+	CALCIFICATION (BILATERAL) PIGMENTATION (BILATERAL) INFILTRATION OF LEUCOCYTES (BILATERAL)	+	+
			THYROID GLANDS	ENLARGEMENT (UNILATERAL)	+	C-CELL ADENOMA (UNILATERAL) HYPERPLASIA OF C-CELLS (UNILATERAL)	+	++ +
			ADRENAL GLANDS			VACUOLAR DEGENERATION OF CORTICAL CELLS (BILATERAL)	+	+
			BRAIN			PIGMENTATION	+	+
			SPINAL CORD			PIGMENTATION	+	+

1) FATE : Y , KILLED ON SCHEDULE 2) GRADE : NEGATIVE NOT PRESENTED 3) GRADE OF MASS :
+ , SLIGHT A , SMALL AND/OR SINGULAR
++ , MODERATE B , MEDIAL AND/OR SPORADIC
+++ , SEVERE C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F1-1011

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 0 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE DAYS	4) ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1011	X	711	HEART		FIBROSIS	++	ASTROCYTOMA: BRAIN
			SPLEEN		HEMOSIDEROSIS CALCIFICATION OF VASCULAR WALL EXTRAMEDULLARY HEMATOPOIESIS	++ + +	
			NASAL CAVITY		INFILTRATION OF LEUCOCYTES	+	
			LUNG	+++	CONGESTION	+++	
			LIVER		INFILTRATION OF LEUCOCYTES FATTY DEGENERATION OF HEPATIC CELLS SMALL GRANULOMA FOCAL ATROPHY OF HEPATIC CELLS MACROPHAGE MIGRATION IN PERIVASCULAR AREA	++ + ++ + ++	
			KIDNEYS		PIGMENTATION (BILATERAL) CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) INFILTRATION OF LEUCOCYTES (UNILATERAL) CALCIFICATION (UNILATERAL)	++ + + +	
			PITUITARY GLAND	+	HEMORRHAGE		
			BRAIN	A	MASS PIGMENTATION ASTROCYTOMA	+	
			SPINAL CORD		PIGMENTATION	+	

1) FATE : X , FOUND DEAD

2) GRADE : NEGATIVE NOT PRESENTED
+ , SLIGHT
++ , MODERATE
+++ , SEVERE

4) DAYS : AFTER START OF TREATMENT

3) GRADE OF MASS :
A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE

APPENDIX 11-F1-1012

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 0 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	GRADE	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS

1012	X	329	HEART			FIBROSIS	+		KERATOACANTHOMA: STOMACH KERATOACANTHOMA: TONGUE INTERSTITIAL NEPHRITIS : KIDNEYS
			THYMUS	BLACKISH CHANGE	+				
			LYMPH NODES (SUBMAXI.)			LYMPHOCYTIC HYPERPLASIA	+		
			LYMPH NODES (MESENT.)			PROLIFERATION OF RETICULAR CELLS	++		
			SPLEEN			HEMOSIDEROSIS	+++		
			LARYNGOPHARYNX			INFLAMMATION	+		
			LUNG			CONGESTIVE EDEMA	+++		
			TONGUE	MASS	A	KERATOACANTHOMA			
			STOMACH			KERATOACANTHOMA			
			LIVER			CONGESTION FATTY DEGENERATION OF HEPATIC CELLS SMALL GRANULOMA	+++ ++ +		
			PANCREAS			REGENERATIVE CHANGE	++		
			KIDNEYS			INTERSTITIAL NEPHRITIS (UNILATERAL) CONGESTION (BILATERAL) PIGMENTATION (BILATERAL)	+++ +++ ++		
			PITUITARY GLAND			MIGRATION OF HEMOSIDERIN-LADEN CELLS	++		

1) FATE : X , FOUND DEAD				2) GRADE : NEGATIVE NOT PRESENTED + , SLIGHT ++ , MODERATE +++ , SEVERE		3) GRADE OF MASS : A , SMALL AND/OR SINGULAR B , MEDIAL AND/OR SPORADIC C , LARGE AND/OR MULTIPLE			
4) DAYS : AFTER START OF TREATMENT									

APPENDIX 11-F1-1012 CONTINUED
 CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
 OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 0 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1012	X	329	HARDERIAN GLANDS			INFILTRATION OF LEUCOCYTES (UNILATERAL)	+	

1) FATE : X / FOUND DEAD

2) GRADE : NEGATIVE NOT PRESENTED
 + / SLIGHT
 ++ / MODERATE
 +++ / SEVERE

3) GRADE OF MASS :
 A / SMALL AND/OR SINGULAR
 B / MEDIAL AND/OR SPORADIC
 C / LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F1-1013
CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 0 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1013	Y	740	HEART			FIBROSIS	+	ISLET-CELL ADENOMA : PANCREAS
			THYMUS			HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	+	
			LYMPH NODES (PULM.HILUS) SPLEEN			BLOOD ABSORPTION	+	
						HEMOSIDEROSIS	+++	
						EXTRAMEDULLARY HEMATOPOIESIS	+	
			BONE MARROW			PROLIFERATION OF RETICULAR CELLS	+	
			NASAL CAVITY			INFILTRATION OF LEUCOCYTES	+	
			LUNG			CALCIFICATION OF VASCULAR WALL INFILTRATION OF LEUCOCYTES HISTIOCYTOSIS	+	
			PAROTID GLANDS			REGENERATIVE CHANGE (UNILATERAL)	+	
			LIVER			FATTY DEGENERATION OF HEPATIC CELLS SMALL GRANULOMA EXTRAMEDULLARY HEMATOPOIESIS FOCAL ATROPHY OF HEPATIC CELLS MACROPHAGE MIGRATION IN PERIVASCULAR AREA INFILTRATION OF LEUCOCYTES	+	
			PANCREAS			NODULE	+	ISLET-CELL ADENOMA

1) FATE : Y , KILLED ON SCHEDULE 2) GRADE : NEGATIVE NOT PRESENTED 3) GRADE OF MASS :
+ , SLIGHT A , SMALL AND/OR SINGULAR
++ , MODERATE B , MEDIAL AND/OR SPORADIC
+++ , SEVERE C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F1-1013 CONTINUED

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 0 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1013	Y	740	KIDNEYS			CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) PIGMENTATION (BILATERAL) INFILTRATION OF LEUCOCYTES (BILATERAL) CALCIFICATION (BILATERAL)	+	
			UTERUS			DILATATION OF DUCT PIGMENTATION INFILTRATION OF LEUCOCYTES	+	
			ADRENAL GLANDS			VACUOLAR DEGENERATION OF CORTICAL CELLS (UNILATERAL)	+	
			HARDERIAN GLANDS			INFILTRATION OF LEUCOCYTES (BILATERAL)	+	
			BRAIN			PIGMENTATION	+	
			SPINAL CORD			PIGMENTATION	+	

1) FATE : Y , KILLED ON SCHEDULE 2) GRADE : NEGATIVE NOT PRESENTED 3) GRADE OF MASS :
+ , SLIGHT A , SMALL AND/OR SINGULAR
++ , MODERATE B , MEDIAL AND/OR SPORADIC
+++ , SEVERE C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F1-1014

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 0 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1014	W 651	HEART			INFILTRATION OF LEUCOCYTES FIBROSIS	+	SQUAMOUS CELL CARCINOMA : TONGUE
		THYMUS			HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	+	
		LYMPH NODES (SUBMAXI.) SPLEEN			LYMPHOCYTIC HYPERPLASIA	++	
		NASAL CAVITY			EXTRAMEDULLARY HEMATOPOIESIS HEMOSIDEROSIS	+	
		LUNG			INFILTRATION OF LEUCOCYTES	++	
		TONGUE			INFILTRATION OF LEUCOCYTES CALCIFICATION OF VASCULAR WALL	+	
		ESOPHAGUS	MASS	A	SQUAMOUS CELL CARCINOMA HYPERKERATOSIS	+	
		PAROTID GLANDS			INFILTRATION OF LEUCOCYTES (BILATERAL)	+	
		LIVER			ANGIECTASIA FATTY DEGENERATION OF HEPATIC CELLS SMALL GRANULOMA	+	
		KIDNEYS			INFILTRATION OF LEUCOCYTES PIGMENTATION (BILATERAL)	+	

1) FATE : W , KILLED IN EXTREMIS 2) GRADE : NEGATIVE NOT PRESENTED 3) GRADE OF MASS :
+ , SLIGHT A , SMALL AND/OR SINGULAR
++ , MODERATE B , MEDIAL AND/OR SPORADIC
+++ , SEVERE C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F1-1014 CONTINUED
CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 0 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1014	W	651	KIDNEYS					
						CALCIFICATION (BILATERAL)	+	
						INFILTRATION OF LEUCOCYTES (UNILATERAL)	+	
						URINE CAST (BILATERAL)	+	
						REGENERATIVE RENAL TUBULE (UNILATERAL)	+	
						THICKENING OF BASEMENT MEMBRANE (UNILATERAL)	+	
			UTERUS			PIGMENTATION	+	
			PITUITARY GLAND			MIGRATION OF HEMOSIDERIN-LADEN CELLS	+	
						HEMORRHAGE	+	
			THYROID GLANDS			HYPERPLASIA OF C-CELLS (UNILATERAL)	+	
			ADRENAL GLANDS			ANGIECTASIA (UNILATERAL)	+	
			EYE BALLS			CATARACT (UNILATERAL)	+	
						RETINAL ATROPHY (UNILATERAL)	++	
			BRAIN			PIGMENTATION	+	
			SPINAL CORD			PIGMENTATION	+	

1) FATE : W , KILLED IN EXTREMIS 2) GRADE : NEGATIVE NOT PRESENTED 3) GRADE OF MASS :
+ , SLIGHT A , SMALL AND/OR SINGULAR
++ , MODERATE B , MEDIAL AND/OR SPORADIC
+++ , SEVERE C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F1-1015
CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 0 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1015	W	547	HEART			FIBROSIS	+	ADENOMA: PITUITARY GLAND
			THYMUS			HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	+	
			SPLEEN			HEMOSIDEROSIS EXTRAMEDULLARY HEMATOPOIESIS	+++ +	
			BONE MARROW			HYPOHEMATOPOIESIS	+	
			NASAL CAVITY			INFILTRATION OF LEUCOCYTES	+	
			PAROTID GLANDS			INFILTRATION OF LEUCOCYTES (UNILATERAL)	+	
			LIVER	YELLOWISH CHANGE	+	FATTY DEGENERATION OF HEPATIC CELLS INFILTRATION OF LEUCOCYTES SMALL GRANULOMA	++ + +	
			PANCREAS			INFILTRATION OF LEUCOCYTES	+	
			KIDNEYS			PIGMENTATION (BILATERAL) CALCIFICATION (BILATERAL) INFILTRATION OF LEUCOCYTES (UNILATERAL) REGENERATIVE RENAL TUBULE (BILATERAL) URINE CAST (BILATERAL)	+ + + + + +	

1) FATE : W , KILLED IN EXTREMIS
2) GRADE : NEGATIVE NOT PRESENTED
3) GRADE OF MASS :
A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE
4) DAYS : AFTER START OF TREATMENT
+ , SLIGHT
++ , MODERATE
+++ , SEVERE

APPENDIX 11-F1-1015 CONTINUED
CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 0 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1015	W	547	KIDNEYS			THICKENING OF BASEMENT MEMBRANE (UNILATERAL)	+	
			URINARY BLADDER			INFILTRATION OF LEUCOCYTES	+	
			UTERUS			INFILTRATION OF LEUCOCYTES PIGMENTATION	+	
			VAGINA			INFILTRATION OF LEUCOCYTES HYPERPLASIA OF MUCOSAL EPITHELIUM	+	
			PITUITARY GLAND	MASS HEMORRHAGE	A ++	ADENOMA	+	
			SKIN			INFILTRATION OF LEUCOCYTES	+	
			MAMMARY GLAND			HYPERPLASIA	++	
			BRAIN	HEMORRHAGE	+	PIGMENTATION HEMORRHAGE DILATATION OF CEREBRAL VENTRICLE	+	

1) FATE : W , KILLED IN EXTREMIS
2) GRADE : NEGATIVE NOT PRESENTED
3) GRADE OF MASS :
A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE
4) DAYS : AFTER START OF TREATMENT
+ , SLIGHT
++ , MODERATE
+++ , SEVERE

APPENDIX 11-F1-1016

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 0 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1016	Y	740	HEART			FIBROSIS	+	PAPILLARY ADENOMA: LUNG
			THYMUS			HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	++	C-CELL ADENOMA: THYROID GLANDS
			LYMPH NODES (PULM.HILUS) SPLEEN			BLOOD ABSORPTION	+	POLYP: UTERUS
						HEMOSIDEROSIS EXTRAMEDULLARY HEMATOPOIESIS	++ +	
			BONE MARROW			PROLIFERATION OF RETICULAR CELLS	+	
			NASAL CAVITY			INFILTRATION OF LEUCOCYTES INFLAMMATION	+	
			LUNG	NODULE	+	INFILTRATION OF LEUCOCYTES CALCIFICATION OF VASCULAR WALL PAPILLARY ADENOMA	+	
			PAROTID GLANDS			REGENERATIVE CHANGE (UNILATERAL)	+	
			LIVER			SMALL GRANULOMA PROLIFERATION OF BILE DUCT INFILTRATION OF LEUCOCYTES FATTY DEGENERATION OF HEPATIC CELLS FOCAL ATROPHY OF HEPATIC CELLS	+	
			PANCREAS			ATROPHY OF PANCREATIC ACINUS	++	

1) FATE : Y , KILLED ON SCHEDULE

2) GRADE : NEGATIVE NOT PRESENTED

3) GRADE OF MASS :

A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

+ , SLIGHT
++ , MODERATE
+++ , SEVERE

APPENDIX 11-F1-1016 CONTINUED
CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 0 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1016	Y	740	PANCREAS					
			KIDNEYS					
						INFILTRATION OF LEUCOCYTES	+	
						INFILTRATION OF LEUCOCYTES (BILATERAL)	+	
						PIGMENTATION (BILATERAL)	+	
						CALCIFICATION (UNILATERAL)	+	
						CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL)	+	
			UTERUS	ENLARGEMENT	++	POLYP PIGMENTATION INFILTRATION OF LEUCOCYTES DILATATION OF DUCT	+	
			THYROID GLANDS			C-CELL ADENOMA (UNILATERAL)	+	
			HARDERIAN GLANDS			HYPERSECRETION (UNILATERAL)	+	
			BRAIN			PIGMENTATION	+	

1) FATE : Y , KILLED ON SCHEDULE 2) GRADE : NEGATIVE NOT PRESENTED 3) GRADE OF MASS :
+ , SLIGHT A , SMALL AND/OR SINGULAR
++ , MODERATE B , MEDIAL AND/OR SPORADIC
+++ , SEVERE C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F1-1017

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 0 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1017	X	646	MULTIPLE ORGANS			MONONUCLEAR CELL LEUKEMIA		MONONUCLEAR CELL LEUKEMIA : MULTIPLE ORGANS
			ABDOMINAL CAVITY HEMORRHAGE	+				
			HEART			FIBROSIS	++	
			THYMUS			HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	+	
			SPLEEN		++ +	ENLARGEMENT NODULE		
			BONE MARROW			ACTIVATION OF HEMATOPOIESIS	+++	
			NASAL CAVITY			INFILTRATION OF LEUCOCYTES	++	
			LUNG			CALCIFICATION OF VASCULAR WALL	+	
			LIVER		++ + +	NODULE ENLARGEMENT ROUGHNESS OF SURFACE	+	
			KIDNEYS			FOCAL ATROPHY OF HEPATIC CELLS CHOLANGIOFIBROSIS MACROPHAGE MIGRATION IN PERIVASCULAR AREA CALCIFICATION (UNILATERAL) PIGMENTATION (BILATERAL) URINE CAST (BILATERAL) INFILTRATION OF LEUCOCYTES (UNILATERAL)	+	

1) FATE : X , FOUND DEAD

2) GRADE : NEGATIVE NOT PRESENTED

3) GRADE OF MASS :

A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

+ , SLIGHT
++ , MODERATE
+++ , SEVERE

APPENDIX 11-F1-1017 CONTINUED
CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 0 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1017	X	646	KIDNEYS			THICKENING OF BASEMENT MEMBRANE (UNILATERAL) REGENERATIVE RENAL TUBULE (UNILATERAL)	+	
			URINARY BLADDER			INFILTRATION OF LEUCOCYTES	+	
			OVARIES	BLACKISH CHANGE (UNILATERAL)	+			
			UTERUS			PIGMENTATION	+	
			PITUITARY GLAND	HEMORRHAGE	+			
			BRAIN			PIGMENTATION	+	
			SPINAL CORD			PIGMENTATION	+	

1) FATE : X , FOUND DEAD 2) GRADE : NEGATIVE NOT PRESENTED 3) GRADE OF MASS :
+ , SLIGHT A , SMALL AND/OR SINGULAR
++ , MODERATE B , MEDIAL AND/OR SPORADIC
+++ , SEVERE C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F1-1018

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 0 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1018	Y	740	HEART			FIBROSIS	+	POLYP: UTERUS
			THYMUS			HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	+	
			SPLEEN			HEMOSIDEROSIS EXTRAMEDULLARY HEMATOPOIESIS	++ ++	
			NASAL CAVITY			INFILTRATION OF LEUCOCYTES OSTEOSCLEROSIS	++ ++	
			TRACHEA			INFILTRATION OF LEUCOCYTES	+	
			LUNG			INFILTRATION OF LEUCOCYTES PLEURISY	++ +	
			LIVER			FATTY DEGENERATION OF HEPATIC CELLS MACROPHAGE MIGRATION IN PERIVASCULAR AREA SMALL GRANULOMA FOCAL ATROPHY OF HEPATIC CELLS INFILTRATION OF LEUCOCYTES	++ ++ ++ ++ ++	
			PANCREAS			INFILTRATION OF LEUCOCYTES	+	
			KIDNEYS			INFILTRATION OF LEUCOCYTES (BILATERAL) CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL)	++ ++ +	

1) FATE : Y , KILLED ON SCHEDULE

2) GRADE : NEGATIVE NOT PRESENTED

+ , SLIGHT

++ , MODERATE

+++ , SEVERE

3) GRADE OF MASS :

A , SMALL AND/OR SINGULAR

B , MEDIAL AND/OR SPORADIC

C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F1-1018 CONTINUED
CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 0 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1018	Y	740	KIDNEYS					
			UTERUS					
				NODULE	+			PIGMENTATION (BILATERAL) CALCIFICATION (BILATERAL)
			PITUITARY GLAND	HEMORRHAGE	+			
						HEMORRHAGE HYPERPLASIA OF CHROMOPHOBE CELLS	++ ++	
			BONE (FEMUR)			OSTEOSCLEROSIS	+++	
			SKIN			INFILTRATION OF LEUCOCYTES	+	
			HARDERIAN GLANDS			INFILTRATION OF LEUCOCYTES (UNILATERAL)	+	
			BRAIN			PIGMENTATION	+	
			SPINAL CORD			PIGMENTATION	+	

1) FATE : Y , KILLED ON SCHEDULE 2) GRADE : NEGATIVE NOT PRESENTED 3) GRADE OF MASS :
+ , SLIGHT A , SMALL AND/OR SINGULAR
++ , MODERATE B , MEDIAL AND/OR SPORADIC
+++ , SEVERE C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F1-1019

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 0 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1019	Y	741	HEART			FIBROSIS	+	NO SIGNIFICANT LESION
			THYMUS			HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	+	
			LYMPH NODES (PULM. HILUS) SPLEEN			BLOOD ABSORPTION	++	
						HEMOSIDEROSIS	++	
						EXTRAMEDULLARY HEMATOPOIESIS	+++	
			NASAL CAVITY			INFILTRATION OF LEUCOCYTES	+	
			LUNG			HISTIOCYTOSIS	+	
						CALCIFICATION OF VASCULAR WALL	+	
			PAROTID GLANDS			INFILTRATION OF LEUCOCYTES (UNILATERAL)	+	
			LIVER			FOCAL ATROPHY OF HEPATIC CELLS	+	
						FATTY DEGENERATION OF HEPATIC CELLS	+	
						INFILTRATION OF LEUCOCYTES	+	
						MACROPHAGE MIGRATION IN PERIVASCULAR AREA	+	
						SMALL GRANULOMA	+	
			KIDNEYS			PIGMENTATION (BILATERAL)	++	
						INFILTRATION OF LEUCOCYTES (BILATERAL)	+	

1) FATE : Y , KILLED ON SCHEDULE

4) DAYS : AFTER START OF TREATMENT

2) GRADE : NEGATIVE NOT PRESENTED
+ , SLIGHT
++ , MODERATE
+++ , SEVERE

3) GRADE OF MASS :
A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE

APPENDIX 11-F1-1019 CONTINUED
CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 0 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	2) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1019	Y	741	KIDNEYS					
			UTERUS			CALCIFICATION (BILATERAL) CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL)	+	
			PITUITARY GLAND			PIGMENTATION	+	
			ADRENAL GLANDS			HEMORRHAGE MIGRATION OF HEMOSIDERIN-LADEN CELLS	+	
			BONE (FEMUR)			ANGIECTASIA (UNILATERAL)	++	
			BRAIN			OSTEOSCLEROSIS	+++	
			SPINAL CORD			PIGMENTATION	+	

1) FATE : Y , KILLED ON SCHEDULE 2) GRADE : NEGATIVE NOT PRESENTED 3) GRADE OF MASS :
+ , SLIGHT A , SMALL AND/OR SINGULAR
++ , MODERATE B , MEDIAL AND/OR SPORADIC
+++ , SEVERE C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F1-1020
CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 0 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1020	Y	741	HEART			FIBROSIS	++	NO SIGNIFICANT LESION
			THYMUS			HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	+	
			LYMPH NODES (PULM. HILUS) SPLEEN			BLOOD ABSORPTION	+	
						EXTRAMEDULLARY HEMATOPOIESIS HEMOSIDEROSIS	++	
			NASAL CAVITY			INFILTRATION OF LEUCOCYTES	+	
			LUNG			INFILTRATION OF LEUCOCYTES	+	
			LIVER			FATTY DEGENERATION OF HEPATIC CELLS + FOCAL ATROPHY OF HEPATIC CELLS SMALL GRANULOMA INFILTRATION OF LEUCOCYTES	++ ++ ++ +	
			KIDNEYS			INFILTRATION OF LEUCOCYTES (BILATERAL) CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) CALCIFICATION (BILATERAL) PIGMENTATION (BILATERAL)	++ ++ ++ ++ ++	
			OVARIES			INFILTRATION OF LEUCOCYTES (UNILATERAL)	+	
			UTERUS			INFILTRATION OF LEUCOCYTES	+	

1) FATE : Y , KILLED ON SCHEDULE
4) DAYS : AFTER START OF TREATMENT

2) GRADE : NEGATIVE NOT PRESENTED
+ , SLIGHT
++ , MODERATE
+++ , SEVERE

3) GRADE OF MASS :
A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE

APPENDIX 11-F1-1020 CONTINUED
CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 0 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1020	Y	741	UTERUS					
			PITUITARY GLAND	CYST	+	PIGMENTATION	+	
						CYST	+	
						MIGRATION OF HEMOSIDERIN-LADEN CELLS	+	
						HYPERPLASIA OF CHROMOPHOBE CELLS	++	
			THYROID GLANDS			HYPERPLASIA OF C-CELLS (BILATERAL)	+	
			EYE BALLS			INFILTRATION OF LEUCOCYTES (UNILATERAL)	+	
			BRAIN			PIGMENTATION	+	
						HYPERPLASIA OF EPENDYMAL CELLS	+	
			SPINAL CORD			PIGMENTATION	+	

1) FATE : Y , KILLED ON SCHEDULE 2) GRADE : NEGATIVE NOT PRESENTED 3) GRADE OF MASS :
+ , SLIGHT A , SMALL AND/OR SINGULAR
++ , MODERATE B , MEDIAL AND/OR SPORADIC
+++ , SEVERE C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F1-1021

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 0 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1021	Y	741	HEART			FIBROSIS	+	NO SIGNIFICANT LESION
			THYMUS			HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	+	
			SPLEEN			HEMOSIDEROSIS EXTRAMEDULLARY HEMATOPOIESIS	++ +	
			NASAL CAVITY			INFILTRATION OF LEUCOCYTES	+++	
			LARYNGOPHARYNX			INFLAMMATION	++	
			LUNG			CALCIFICATION OF VASCULAR WALL INFILTRATION OF LEUCOCYTES	+	
			STOMACH			HEMORRHAGE	+	
			PAROTID GLANDS			INFILTRATION OF LEUCOCYTES (BILATERAL)	+	
			LIVER			FATTY DEGENERATION OF HEPATIC CELLS INFILTRATION OF LEUCOCYTES CHOLANGIOFIBROSIS SMALL GRANULOMA FOCAL ATROPHY OF HEPATIC CELLS MACROPHAGE MIGRATION IN PERIVASCULAR AREA	+	
			PANCREAS			INFILTRATION OF LEUCOCYTES	+	
			KIDNEYS			CALCIFICATION (BILATERAL)	+	
				1) FATE : Y , KILLED ON SCHEDULE	2) GRADE : NEGATIVE NOT PRESENTED + , SLIGHT ++ , MODERATE +++ , SEVERE	3) GRADE OF MASS : A , SMALL AND/OR SINGULAR B , MEDIAL AND/OR SPORADIC C , LARGE AND/OR MULTIPLE		
				4) DAYS : AFTER START OF TREATMENT				

APPENDIX 11-F1-1021 CONTINUED
CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 0 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
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1021 Y 741 KIDNEYS

INFILTRATION OF LEUCOCYTES
(BILATERAL) +

CHRONIC PROGRESSIVE
GLOMERULONEPHROPATHY (BILATERAL) +
PIGMENTATION (BILATERAL) +

URINARY BLADDER
HEMORRHAGE ++

UTERUS
PIGMENTATION +

PITUITARY GLAND
MIGRATION OF HEMOSIDERIN-LADEN
CELLS +

HYPERPLASIA OF CHROMOPHOBE CELLS +

THYROID GLANDS
HYPERPLASIA OF C-CELLS (UNILATERAL) +

ADRENAL GLANDS
ANGIECTASIA (UNILATERAL) ++
VACUOLAR DEGENERATION OF CORTICAL
CELLS (UNILATERAL) +

BONE (FEMUR)
OSTEOSCLEROSIS ++

BRAIN
PIGMENTATION +

SPINAL CORD
PIGMENTATION +

1) FATE : Y , KILLED ON SCHEDULE	2) GRADE : NEGATIVE NOT PRESENTED + , SLIGHT ++ , MODERATE +++ , SEVERE	3) GRADE OF MASS : A , SMALL AND/OR SINGULAR B , MEDIAL AND/OR SPORADIC C , LARGE AND/OR MULTIPLE
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APPENDIX 11-F1-1022

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 0 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1022	Y	741	HEART			FIBROSIS	++	FIBROADENOMA: MAMMARY GLAND
			THYMUS			HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	++	
			LYMPH NODES (PULM. HILUS) SPLEEN			BLOOD ABSORPTION	+++	
						HEMOSIDEROSIS	++	
						EXTRAMEDULLARY HEMATOPOIESIS	+	
			NASAL CAVITY			INFILTRATION OF LEUCOCYTES	++	
			LARYNGOPHARYNX			FOREIGN BODY GRANULOMA	+	
			TRACHEA			INFILTRATION OF LEUCOCYTES	+	
			LUNG			OSSEOUS TISSUE	+	
						CALCIFICATION OF VASCULAR WALL	+	
						HISTIOCYTOSIS	+	
			PAROTID GLANDS			INFILTRATION OF LEUCOCYTES (UNILATERAL)	+	
						REGENERATIVE CHANGE (UNILATERAL)	+	
			LIVER			FATTY DEGENERATION OF HEPATIC CELLS	+	
						SMALL GRANULOMA	+	
						MACROPHAGE MIGRATION IN PERIVASCULAR AREA	++	

1) FATE : Y , KILLED ON SCHEDULE

2) GRADE : NEGATIVE NOT PRESENTED

3) GRADE OF MASS :

A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F1-1022 CONTINUED
CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 0 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1022	Y	741	LIVER			FOCAL ATROPHY OF HEPATIC CELLS INFILTRATION OF LEUCOCYTES HYPERPLASTIC NODULE	+	
			PANCREAS			ATROPHY OF PANCREATIC ACINUS INFILTRATION OF LEUCOCYTES	+	
			KIDNEYS			PIGMENTATION (BILATERAL) CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) INFILTRATION OF LEUCOCYTES (BILATERAL)	++ + +	
			UTERUS			PIGMENTATION DILATATION OF DUCT	+	
			SKIN			INFILTRATION OF LEUCOCYTES	+	
			MAMMARY GLAND	MASS	C	FIBROADENOMA		
			BRAIN			PIGMENTATION	+	
			SPINAL CORD			PIGMENTATION	+	

1) FATE : Y , KILLED ON SCHEDULE

2) GRADE : NEGATIVE NOT PRESENTED

3) GRADE OF MASS :

A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

+ , SLIGHT
++ , MODERATE
+++ , SEVERE

APPENDIX 11-F1-1023

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 0 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1023	Y	741	MULTIPLE ORGANS			MONONUCLEAR CELL LEUKEMIA		FIBROADENOMA: MAMMARY GLAND
			HEART			INFILTRATION OF LEUCOCYTES	+	MONONUCLEAR CELL LEUKEMIA
			THYMUS			HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	+	: MULTIPLE ORGANS
			SPLEEN	ENLARGEMENT	+++			
			NASAL CAVITY			INFILTRATION OF LEUCOCYTES	++	
			STOMACH			DILATATION OF GASTRIC FAVEOLAE	+	
			SUBMAXILLARY GLANDS			INFILTRATION OF LEUCOCYTES (BILATERAL)	+	
			SUBLINGUAL GLANDS			INFILTRATION OF LEUCOCYTES (BILATERAL)	+	
			PAROTID GLANDS			REGENERATIVE CHANGE (UNILATERAL)	+	
			LIVER	ROUGHNESS OF SURFACE	+++	FATTY DEGENERATION OF HEPATIC CELLS SMALL GRANULOMA EXTRAMEDULLARY HEMATOPOIESIS FOCAL ATROPHY OF HEPATIC CELLS	+ + ++ +	
			PANCREAS			INFILTRATION OF LEUCOCYTES	+	
			KIDNEYS			CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL)	+	
1) FATE : Y , KILLED ON SCHEDULE				2) GRADE : NEGATIVE NOT PRESENTED		3) GRADE OF MASS :		A , SMALL AND/OR SINGULAR B , MEDIAL AND/OR SPORADIC C , LARGE AND/OR MULTIPLE
4) DAYS : AFTER START OF TREATMENT				+ , SLIGHT ++ , MODERATE +++ , SEVERE				

APPENDIX 11-F1-1023 CONTINUED
CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 0 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
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1023 Y 741 KIDNEYS

INFILTRATION OF LEUCOCYTES
(BILATERAL)
PIGMENTATION (BILATERAL)
CALCIFICATION (BILATERAL)

+

++

+

OVARIES

INFILTRATION OF LEUCOCYTES
(UNILATERAL)

+

UTERUS

PIGMENTATION
INFILTRATION OF LEUCOCYTES

+

+

PITUITARY GLAND HEMORRHAGE

+

+

MIGRATION OF HEMOSIDERIN-LADEN
CELLS
HYPERPLASIA OF CHROMOPHOBIC CELLS

++

MAMMARY GLAND MASS

A

HARDERIAN GLANDS

INFILTRATION OF LEUCOCYTES
(BILATERAL)

+

BRAIN

PIGMENTATION

+

SPINAL CORD

PIGMENTATION

+

1) FATE : Y , KILLED ON SCHEDULE

2) GRADE : NEGATIVE NOT PRESENTED

3) GRADE OF MASS :

A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

+ , SLIGHT
++ , MODERATE
+++ , SEVERE

APPENDIX 11-F1-1024

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 0 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1024	Y	741	HEART			FIBROSIS	+	ADENOMA: PITUITARY GLAND
			THYMUS			HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	+	C-CELL ADENOMA: THYROID GLANDS
			LYMPH NODES (PULM. HILUS) SPLEEN			BLOOD ABSORPTION	++	ADENOCARCINOMA: UTERUS
						HEMOSIDEROSIS	++	
						EXTRAMEDULLARY HEMATOPOIESIS	++	
			NASAL CAVITY			INFILTRATION OF LEUCOCYTES	+	
			LUNG			INFILTRATION OF LEUCOCYTES	+	
			LIVER			PROLIFERATION OF BILE DUCT WITH FIBROSIS	+	
						SMALL GRANULOMA	+	
						FOCAL ATROPHY OF HEPATIC CELLS	+	
						FATTY DEGENERATION OF HEPATIC CELLS	+	
						MACROPHAGE MIGRATION IN PERIVASCULAR AREA	+	
			KIDNEYS			CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL)	+	
						PIGMENTATION (BILATERAL)	+	
						CALCIFICATION (BILATERAL)	+	
						INFILTRATION OF LEUCOCYTES (UNILATERAL)	+	
			UTERUS	MASS	C	HEMORRHAGE	+++	

1) FATE : Y , KILLED ON SCHEDULE

2) GRADE : NEGATIVE NOT PRESENTED

3) GRADE OF MASS :

A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

+ , SLIGHT
++ , MODERATE
+++ , SEVERE

APPENDIX 11-F1-1024 CONTINUED
CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 0 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1024	Y	741	UTERUS	HEMORRHAGE	+	ADENOCARCINOMA		
			PITUITARY GLAND			ADENOMA		
			THYROID GLANDS			C-CELL ADENOMA (UNILATERAL) HYPERPLASIA OF C-CELLS (UNILATERAL)	+	
			ADRENAL GLANDS			VACUOLAR DEGENERATION OF CORTICAL CELLS (UNILATERAL) INFILTRATION OF LEUCOCYTES (UNILATERAL)	+	
			MAMMARY GLAND			HYPERPLASIA	++	
			HARDERIAN GLANDS			INFILTRATION OF LEUCOCYTES (UNILATERAL)	+	
			BRAIN			PIGMENTATION	+	
			SPINAL CORD			PIGMENTATION	+	

1) FATE : Y , KILLED ON SCHEDULE 2) GRADE : NEGATIVE NOT PRESENTED 3) GRADE OF MASS :
+ , SLIGHT A , SMALL AND/OR SINGULAR
++ , MODERATE B , MEDIAL AND/OR SPORADIC
+++ , SEVERE C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F1-1025
CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 0 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1025	Y	741	HEART			FIBROSIS	+	ADENOMA: PITUITARY GLAND
			THYMUS			HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	++	
			SPLEEN			HEMOSIDEROSIS EXTRAMEDULLARY HEMATOPOIESIS	+++ +	
			NASAL CAVITY			INFILTRATION OF LEUCOCYTES	+	
			LARYNGOPHARYNX			INFLAMMATION HYPERSECRETION	++ ++	
			SUBMAXILLARY GLANDS			INFILTRATION OF LEUCOCYTES (UNILATERAL)	+	
			LIVER		+	YELLOWISH CHANGE FATTY DEGENERATION OF HEPATIC CELLS FOCAL ATROPHY OF HEPATIC CELLS SMALL GRANULOMA INFILTRATION OF LEUCOCYTES MACROPHAGE MIGRATION IN PERIVASCULAR AREA	++ + + + +	
			PANCREAS			ATROPHY OF PANCREATIC ACINUS INFILTRATION OF LEUCOCYTES	++ +	
			KIDNEYS		+	ROUGHNESS OF SURFACE (BILATERAL) CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL)	++	

1) FATE : Y , KILLED ON SCHEDULE

2) GRADE : NEGATIVE NOT PRESENTED

3) GRADE OF MASS :

A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

+, SLIGHT
++, MODERATE
+++, SEVERE

APPENDIX 11-F1-1025 CONTINUED
CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 0 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1025	Y	741	KIDNEYS				
					PIGMENTATION (BILATERAL) INFILTRATION OF LEUCOCYTES (BILATERAL) CALCIFICATION (BILATERAL)	+ + +	
			UTERUS		PIGMENTATION	+	
			PITUITARY GLAND	+++ ++	ADENOMA		
			ADRENAL GLANDS		INFILTRATION OF LEUCOCYTES (UNILATERAL) VACUOLAR DEGENERATION OF CORTICAL CELLS (UNILATERAL)	+ +	
			MAMMARY GLAND		HYPERPLASIA	+	
			BRAIN	+	HEMORRHAGE PIGMENTATION	+ +	
			SPINAL CORD		PIGMENTATION	+	

1) FATE : Y , KILLED ON SCHEDULE 2) GRADE : NEGATIVE NOT PRESENTED 3) GRADE OF MASS :
+ , SLIGHT A , SMALL AND/OR SINGULAR
++ , MODERATE B , MEDIAL AND/OR SPORADIC
+++ , SEVERE C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F1-1026
CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 0 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1026	Y	741	HEART			INFILTRATION OF LEUCOCYTES	+	C-CELL ADENOMA: THYROID GLANDS
			THYMUS			HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	+	
			LYMPH NODES (PULM. HILUS) SPLEEN			BLOOD ABSORPTION	+	
						HEMOSIDEROSIS	++	
						EXTRAMEDULLARY HEMATOPOIESIS	+	
			BONE MARROW			PROLIFERATION OF RETICULAR CELLS	+	
			NASAL CAVITY			INFILTRATION OF LEUCOCYTES	++	
			LARYNGOPHARYNX			INFILTRATION OF LEUCOCYTES	+	
			TRACHEA			INFILTRATION OF LEUCOCYTES	+	
			LUNG			INFILTRATION OF LEUCOCYTES	+	
						OSSEOUS TISSUE	+	
						CALCIFICATION OF VASCULAR WALL	+	
						HISTIOCYTOSIS	+	
			STOMACH			DILATATION OF GASTRIC FAVEOLAE	+	
			SUBLINGUAL GLANDS			HYPERPLASIA OF DUCTAL EPITHELIUM (UNILATERAL)	++	
			LIVER			FOCAL ATROPHY OF HEPATIC CELLS	+	

1) FATE : Y , KILLED ON SCHEDULE 2) GRADE : NEGATIVE NOT PRESENTED 3) GRADE OF MASS :
+ , SLIGHT A , SMALL AND/OR SINGULAR
++ , MODERATE B , MEDIAL AND/OR SPORADIC
+++ , SEVERE C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F1-1026 CONTINUED

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 0 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1026	Y	741	LIVER					
			KIDNEYS					
			OVARIES	CYST (UNILATERAL)	+			
			UTERUS					
			THYROID GLANDS	NODULE (UNILATERAL)	+			
			HARDERIAN GLANDS					
			BRAIN					
			SPINAL CORD					

INFILTRATION OF LEUCOCYTES +
FATTY DEGENERATION OF HEPATIC CELLS +
SMALL GRANULOMA +

CHRONIC PROGRESSIVE +
GLOMERULONEPHROPATHY (BILATERAL)
PIGMENTATION (BILATERAL) +
INFILTRATION OF LEUCOCYTES +
(BILATERAL)
CALCIFICATION (BILATERAL) +

FOLLICULAR CYST (UNILATERAL) ++
PIGMENTATION +

C-CELL ADENOMA (UNILATERAL) +
HYPERPLASIA OF C-CELLS (UNILATERAL) +
HEMORRHAGE (UNILATERAL) +
MIGRATION OF HEMOSIDERIN-LADEN
CELLS (UNILATERAL) +

INFILTRATION OF LEUCOCYTES +
(UNILATERAL)
HYPERPLASIA OF GLANDULAR EPITHELIAL +
CELLS (UNILATERAL)

PIGMENTATION +
PIGMENTATION +

1) FATE : Y , KILLED ON SCHEDULE 2) GRADE : NEGATIVE NOT PRESENTED 3) GRADE OF MASS :
+ , SLIGHT A , SMALL AND/OR SINGULAR
++ , MODERATE B , MEDIAL AND/OR SPORADIC
+++ , SEVERE C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F1-1027
CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 0 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1027	W	645	MULTIPLE ORGANS			MONONUCLEAR CELL LEUKEMIA		MONONUCLEAR CELL LEUKEMIA
			HEART			FIBROSIS	+	: MULTIPLE ORGANS
			THYMUS			HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	+	MEDULLOBLASTOMA: BRAIN
			LYMPH NODES (PULM. HILUS)			BLOOD ABSORPTION	+	
			SPLEEN	ENLARGEMENT	++	HEMOSIDEROSIS	+	
			BONE MARROW			ACTIVATION OF HEMATOPOIESIS	+	
			NASAL CAVITY			INFLAMMATION	++	
			LARYNGOPHARYNX			INFILTRATION OF LEUCOCYTES	+	
			LUNG			CALCIFICATION OF VASCULAR WALL	+	
			PAROTID GLANDS			REGENERATIVE CHANGE (UNILATERAL)	+	
			LIVER	ROUGHNESS OF SURFACE YELLOWISH CHANGE	+++ +++	MACROPHAGE MIGRATION IN PERIVASCULAR AREA FATTY DEGENERATION OF HEPATIC CELLS SMALL GRANULOMA CHOLANGIOFIBROSIS EXTRAMEDULLARY HEMATOPOIESIS	++ ++ + + ++	
			PANCREAS			ATROPHY OF PANCREATIC ACINUS	+	

1) FATE : W , KILLED IN EXTREMIS

2) GRADE : NEGATIVE NOT PRESENTED

3) GRADE OF MASS :

A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F1-1027 CONTINUED
CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 0 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE DAYS	4) W	645	KIDNEYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1027								CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) INFILTRATION OF LEUCOCYTES (BILATERAL) CALCIFICATION (BILATERAL)	+	
				UTERUS				PIGMENTATION	+	
				VAGINA				HYPERPLASIA OF MUCOSAL EPITHELIUM	++	
				THYROID GLANDS				HYPERPLASIA OF C-CELLS (UNILATERAL)	+	
				HARDERIAN GLANDS				INFILTRATION OF LEUCOCYTES (UNILATERAL)	+	
				BRAIN		MASS	A	MEDULLOBLASTOMA		
				SPINAL CORD				PIGMENTATION	+	

1) FATE : W , KILLED IN EXTREMIS
2) GRADE : NEGATIVE NOT PRESENTED
+ , SLIGHT
++ , MODERATE
+++ , SEVERE
3) GRADE OF MASS :
A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE
4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F1-1028
CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 0 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1028	W	687	MULTIPLE ORGANS			MONONUCLEAR CELL LEUKEMIA		MONONUCLEAR CELL LEUKEMIA
			HEART			FIBROSIS	+	: MULTIPLE ORGANS POLYP: UTERUS
			THYMUS			HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	++	
			SPLEEN	ENLARGEMENT	+++			
			NASAL CAVITY					
			LUNG	HEMORRHAGE	+			
			LIVER	ROUGHNESS OF SURFACE	+++			
						INFILTRATION OF LEUCOCYTES	+	
						CALCIFICATION OF VASCULAR WALL	+	
						HISTIOCYTOSIS	+	
						HEMORRHAGE	+	
						PROLIFERATION OF BILE DUCT WITH FIBROSIS	+	
						EXTRAMEDULLARY HEMATOPOIESIS	+	
						MACROPHAGE MIGRATION IN PERIVASCULAR AREA	+	
						HEMORRHAGE	+	
			KIDNEYS			CALCIFICATION (BILATERAL)	+	
						PIGMENTATION (BILATERAL)	++	
						URINE CAST (BILATERAL)	+	
						REGENERATIVE RENAL TUBULE (BILATERAL)	+	
						INFILTRATION OF LEUCOCYTES (BILATERAL)	+	
			UTERUS			PIGMENTATION	+	

1)	FATE : W	KILLED IN EXTREMIS	2)	GRADE : NEGATIVE NOT PRESENTED	3)	GRADE OF MASS :		
				+		A , SMALL AND/OR SINGULAR		
				++		B , MEDIAL AND/OR SPORADIC		
				+++		C , LARGE AND/OR MULTIPLE		
4)	DAYS : AFTER START OF TREATMENT							

APPENDIX 11-F1-1028 CONTINUED

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 0 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1028	W	687	UTERUS					
						POLYP		
			PITUITARY GLAND	HEMORRHAGE	+			
						HYPERPLASIA OF CHROMOPHOBIC CELLS	++	
						HEMORRHAGE	+	
						MIGRATION OF HEMOSIDERIN-LADEN CELLS	+	
			THYROID GLANDS			HYPERPLASIA OF C-CELLS (UNILATERAL)	+	
			ADRENAL GLANDS			HEMORRHAGE (BILATERAL)	+	
						VACUOLAR DEGENERATION OF CORTICAL CELLS (UNILATERAL)	+	
			BRAIN			PIGMENTATION	+	
			SPINAL CORD			PIGMENTATION	+	

1) FATE : W / KILLED IN EXTREMIS 2) GRADE : NEGATIVE NOT PRESENTED 3) GRADE OF MASS :
+ , SLIGHT A , SMALL AND/OR SINGULAR
++ , MODERATE B , MEDIAL AND/OR SPORADIC
+++ , SEVERE C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F1-1029

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 0 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE DAYS	4) ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1029	Y	741	HEART		FIBROSIS	+	ADENOMA: PITUITARY GLAND
			THYMUS		HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	+	GRANULOSA-THECA CELL TUMOR: OVARIES
			LYMPH NODES (PULM.HILUS) SPLEEN		BLOOD ABSORPTION	+	
					HEMOSIDEROSIS	+++	
					EXTRAMEDULLARY HEMATOPOIESIS	++	
			BONE MARROW		PROLIFERATION OF RETICULAR CELLS	+	
			NASAL CAVITY		INFILTRATION OF LEUCOCYTES	+	
			LUNG		CALCIFICATION OF VASCULAR WALL	+	
					HISTIOCYTOSIS	+	
					ADENOMATOSIS	++	
			LIVER		SMALL GRANULOMA	+	
				+	MACROPHAGE MIGRATION IN PERIVASCULAR AREA	+	
					FOCAL ATROPHY OF HEPATIC CELLS	+	
					INFILTRATION OF LEUCOCYTES	+	
					FATTY DEGENERATION OF HEPATIC CELLS	+	
			PANCREAS		ATROPHY OF PANCREATIC ACINUS	++	
			KIDNEYS		CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL)	+	

1) FATE : Y , KILLED ON SCHEDULE

2) GRADE : NEGATIVE NOT PRESENTED

3) GRADE OF MASS :

A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F1-1029 CONTINUED
CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 0 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
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1029 Y 741 KIDNEYS

PIGMENTATION (BILATERAL)
INFILTRATION OF LEUCOCYTES
(BILATERAL)
CALCIFICATION (UNILATERAL) +

OVARIES

GRANULOSA-THECA CELL TUMOR
(UNILATERAL)

UTERUS

PIGMENTATION +

VAGINA

HYPERPLASIA OF MUCOSAL EPITHELIUM +

PITUITARY GLAND ENLARGEMENT
HEMORRHAGE

ADENOMA +

MAMMARY GLAND

INFILTRATION OF LEUCOCYTES +

BRAIN

PIGMENTATION +

SPINAL CORD

PIGMENTATION +

1) FATE : Y , KILLED ON SCHEDULE	2) GRADE : NEGATIVE NOT PRESENTED + , SLIGHT ++ , MODERATE +++ , SEVERE	3) GRADE OF MASS : A , SMALL AND/OR SINGULAR B , MEDIAL AND/OR SPORADIC C , LARGE AND/OR MULTIPLE
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4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F1-1030

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 0 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE FATE DAYS	4) ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1030	Y	742 HEART			FIBROSIS	+	C-CELL ADENOMA: THYROID GLANDS
		THYMUS			HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	+	ADENOMA: PITUITARY GLAND
		LYMPH NODES (PULM.HILUS) SPLEEN			BLOOD ABSORPTION	+	
					Hemosiderosis	+++	
		BONE MARROW			PROLIFERATION OF RETICULAR CELLS	+	
		NASAL CAVITY			INFILTRATION OF LEUCOCYTES	+	
		LUNG			CALCIFICATION OF VASCULAR WALL INFILTRATION OF LEUCOCYTES	+	
		STOMACH			DILATATION OF GASTRIC FAVEOLAE	+	
		SUBMAXILLARY GLANDS			INFILTRATION OF LEUCOCYTES (UNILATERAL)	+	
		SUBLINGUAL GLANDS			INFILTRATION OF LEUCOCYTES (UNILATERAL)	+	
		PAROTID GLANDS			INFILTRATION OF LEUCOCYTES (UNILATERAL)	+	
		LIVER			FOCAL ATROPHY OF HEPATIC CELLS	++	

1) FATE : Y , KILLED ON SCHEDULE

2) GRADE : NEGATIVE NOT PRESENTED

3) GRADE OF MASS :

A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

+ , SLIGHT
++ , MODERATE
+++ , SEVERE

APPENDIX 11-F1-1030 CONTINUED
CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 0 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1030	Y	742	LIVER					
						SMALL GRANULOMA	+	
			KIDNEYS			CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL)	+	
						PIGMENTATION (BILATERAL)	+	
						CALCIFICATION (BILATERAL)	+	
						INFILTRATION OF LEUCOCYTES (BILATERAL)	+	
			UTERUS			PIGMENTATION	+	
						INFILTRATION OF LEUCOCYTES	+	
			PITUITARY GLAND	HEMORRHAGE	+	CYST ADENOMA	+	
			THYROID GLANDS	ENLARGEMENT (UNILATERAL) GRAYISH CHANGE (UNILATERAL)	+	C-CELL ADENOMA (UNILATERAL) HYPERPLASIA OF C-CELLS (UNILATERAL)	++	
			HARDERIAN GLANDS			INFILTRATION OF LEUCOCYTES (BILATERAL)	+	
			BRAIN			PIGMENTATION	+	

1) FATE : Y , KILLED ON SCHEDULE 2) GRADE : NEGATIVE NOT PRESENTED 3) GRADE OF MASS :
+ , SLIGHT A , SMALL AND/OR SINGULAR
++ , MODERATE B , MEDIAL AND/OR SPORADIC
+++ , SEVERE C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F1-1031

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 0 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1031	Y	742	HEART			FIBROSIS	+	C-CELL ADENOMA: THYROID GLANDS
			THYMUS			HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	+	FOLLICULAR ADENOMA : THYROID GLANDS
			LYMPH NODES (PULM.HILUS) SPLEEN			BLOOD ABSORPTION	+	
			BONE MARROW			HEMOSIDEROSIS	++	
			NASAL CAVITY			INCREASE OF GRANULOCYTES	++	
			LUNG			INFILTRATION OF LEUCOCYTES	+	
						INFILTRATION OF LEUCOCYTES	+	
						CALCIFICATION OF VASCULAR WALL	+	
			ILEUM			INFLAMMATION	+++	
			LIVER			INFILTRATION OF LEUCOCYTES	+	
						FOCAL ATROPHY OF HEPATIC CELLS	+	
			PANCREAS			FIBROSIS	+	
			KIDNEYS			CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL)	+	
						INFILTRATION OF LEUCOCYTES (BILATERAL)	+	
						PIGMENTATION (BILATERAL)	+	

1) FATE : Y , KILLED ON SCHEDULE

2) GRADE : NEGATIVE NOT PRESENTED

+ , SLIGHT

++ , MODERATE

+++ , SEVERE

3) GRADE OF MASS :

A , SMALL AND/OR SINGULAR

B , MEDIAL AND/OR SPORADIC

C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F1-1031 CONTINUED
CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 0 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1031	Y	742	KIDNEYS			CALCIFICATION (UNILATERAL)	+	
			OVARIES	CYST (UNILATERAL)	+	FOLLICULAR CYST (UNILATERAL)	++	
			UTERUS			PIGMENTATION	+	
			THYROID GLANDS			FOLLICULAR ADENOMA (UNILATERAL) C-CELL ADENOMA (UNILATERAL)		
			HARDERIAN GLANDS			INFILTRATION OF LEUCOCYTES (BILATERAL)	+	
			BRAIN			PIGMENTATION	+	
			SPINAL CORD			PIGMENTATION	+	

1) FATE : Y , KILLED ON SCHEDULE 2) GRADE : NEGATIVE NOT PRESENTED 3) GRADE OF MASS :
+ , SLIGHT A , SMALL AND/OR SINGULAR
++ , MODERATE B , MEDIAL AND/OR SPORADIC
+++ , SEVERE C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F1-1032

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 0 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1032	Y	742	THYMUS			HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	+	NO SIGNIFICANT LESION
			LYMPH NODES (MESENT.) SPLEEN			ANGIECTASIA	+	
						HEMOSIDEROSIS EXTRAMEDULLARY HEMATOPOIESIS	++ +	
			NASAL CAVITY			INFILTRATION OF LEUCOCYTES	+	
			LUNG			INFILTRATION OF LEUCOCYTES	+	
			PAROTID GLANDS			REGENERATIVE CHANGE (UNILATERAL)	+	
			LIVER			SMALL GRANULOMA FOCAL ATROPHY OF HEPATIC CELLS INFILTRATION OF LEUCOCYTES	++ ++ +	
			KIDNEYS			INFILTRATION OF LEUCOCYTES (BILATERAL) CALCIFICATION (BILATERAL) REGENERATIVE RENAL TUBULE (BILATERAL) GLOMERULOSCLEROSIS (BILATERAL) PIGMENTATION (BILATERAL) URINE CAST (BILATERAL)	++ ++ ++ ++ ++ ++ ++	
			UTERUS			PIGMENTATION	+	

1) FATE : Y , KILLED ON SCHEDULE

2) GRADE : NEGATIVE NOT PRESENTED

3) GRADE OF MASS :

A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

+ , SLIGHT
++ , MODERATE
+++ , SEVERE

APPENDIX 11-F1-1032 CONTINUED
 CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
 OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 0 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1032	Y	742	UTERUS					
			EYE BALLS				++	
			BRAIN				+	
			SPINAL CORD				+	
						HYPERPLASIA OF ENDOMETRIAL EPITHELIUM		
						CALCIFICATION, SCLERA (UNILATERAL)	+	
						PIGMENTATION	+	
						PIGMENTATION	+	

1) FATE : Y , KILLED ON SCHEDULE 2) GRADE : NEGATIVE NOT PRESENTED 3) GRADE OF MASS :
 + , SLIGHT A , SMALL AND/OR SINGULAR
 ++ , MODERATE B , MEDIAL AND/OR SPORADIC
 +++ , SEVERE C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F1-1033
CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 0 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1033	W	715	MULTIPLE ORGANS			MONONUCLEAR CELL LEUKEMIA		C-CELL ADENOMA: THYROID GLANDS
			HEART			FIBROSIS	+	MONONUCLEAR CELL LEUKEMIA
			THYMUS			HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	+	: MULTIPLE ORGANS
			LYMPH NODES (MESENT.)	ENLARGEMENT	+			
			SPLEEN	ENLARGEMENT	+++	HEMOSIDEROSIS	+	
			NASAL CAVITY			INFLAMMATION	++	
			LUNG	HEMORRHAGE	+	HEMORRHAGE HISTIOCYTOSIS	+	
			PAROTID GLANDS			REGENERATIVE CHANGE (UNILATERAL)	+	
			LIVER	NODULE	+	FIBROSIS	+	
			PANCREAS			FIBROSIS	+	
			KIDNEYS			PIGMENTATION (BILATERAL) URINE CAST (BILATERAL) CALCIFICATION (UNILATERAL) REGENERATIVE RENAL TUBULE (UNILATERAL)	++ + + +	
			OVARIES	CYST (UNILATERAL)	+	FOLLICULAR CYST (UNILATERAL)	+	

1) FATE : W , KILLED IN EXTREMIS

2) GRADE : NEGATIVE NOT PRESENTED

3) GRADE OF MASS :

A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

+ , SLIGHT
++ , MODERATE
+++ , SEVERE

APPENDIX 11-F1-1033 CONTINUED
CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 0 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1033	W	715	UTERUS			PIGMENTATION	+	
			THYROID GLANDS			C-CELL ADENOMA (UNILATERAL)		
			EYE BALLS			CALCIFICATION, SCLERA (UNILATERAL)	+	
			HARDERIAN GLANDS			INFILTRATION OF LEUCOCYTES (UNILATERAL)	+	
			BRAIN			PIGMENTATION	+	
			SPINAL CORD			PIGMENTATION	+	

1) FATE : W / KILLED IN EXTREMIS
2) GRADE : NEGATIVE NOT PRESENTED
+ / SLIGHT
++ / MODERATE
+++ / SEVERE
3) GRADE OF MASS :
A / SMALL AND/OR SINGULAR
B / MEDIAL AND/OR SPORADIC
C / LARGE AND/OR MULTIPLE
4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F1-1034

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 0 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1034	Y	742	MULTIPLE ORGANS					
			HEART			MONONUCLEAR CELL LEUKEMIA		ADENOMA: PITUITARY GLAND MONONUCLEAR CELL LEUKEMIA
			THYMUS			FIBROSIS	+	: MULTIPLE ORGANS
			LYMPH NODES (PULM.HILUS)			HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	+	
			SPLEEN	ENLARGEMENT	+	BLOOD ABSORPTION	+	
						EXTRAMEDULLARY HEMATOPOIESIS	+	
						HENOSIDEROSES	+	
			NASAL CAVITY			INFILTRATION OF LEUCOCYTES	+	
			LARYNGOPHARYNX			INFILTRATION OF LEUCOCYTES	+	
			LUNG			CALCIFICATION OF VASCULAR WALL	+	
			LIVER	NODULE	+	INFILTRATION OF LEUCOCYTES	+	
						SMALL GRANULOMA	+	
						FATTY DEGENERATION OF HEPATIC CELLS	+	
						FOCAL ATROPHY OF HEPATIC CELLS	+	
						MACROPHAGE MIGRATION	+	
						IN PERIVASCULAR AREA	+	
						CHOLANGIOFIBROSIS	+	
			KIDNEYS	ROUGHNESS OF SURFACE (BILATERAL)	+	CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL)	++	

1) FATE : Y , KILLED ON SCHEDULE

2) GRADE : NEGATIVE NOT PRESENTED

3) GRADE OF MASS :

A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

+ , SLIGHT
++ , MODERATE
+++ , SEVERE

APPENDIX 11-F1-1034 CONTINUED
CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 0 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1034	Y	742	KIDNEYS			INFILTRATION OF LEUCOCYTES (BILATERAL)	+	
						PIGMENTATION (BILATERAL)	++	
						CALCIFICATION (UNILATERAL)	+	
			URINARY BLADDER			INFILTRATION OF LEUCOCYTES	+	
			UTERUS			PIGMENTATION	+	
			PITUITARY GLAND	ENLARGEMENT HEMORRHAGE	++ +	ADENOMA		
			THYROID GLANDS			HYPERPLASIA OF C-CELLS (BILATERAL)	+	
			ADRENAL GLANDS			INFILTRATION OF LEUCOCYTES (UNILATERAL)	+	
			MAMMARY GLAND			INFILTRATION OF LEUCOCYTES	+	
			HARDERIAN GLANDS			INFILTRATION OF LEUCOCYTES (UNILATERAL)	+	
			BRAIN			PIGMENTATION	+	
			SPINAL CORD			PIGMENTATION	+	

1) FATE : Y , KILLED ON SCHEDULE 2) GRADE : NEGATIVE NOT PRESENTED 3) GRADE OF MASS :
+ , SLIGHT A , SMALL AND/OR SINGULAR
++ , MODERATE B , MEDIAL AND/OR SPORADIC
+++ , SEVERE C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F1-1035

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 0 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1035	Y	742	MULTIPLE ORGANS			MONONUCLEAR CELL LEUKEMIA		MONONUCLEAR CELL LEUKEMIA : MULTIPLE ORGANS
			THYMUS			HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	+	
			LYMPH NODES (SUBMAXI.) SPLEEN			INCREASE OF PLASMA CELLS	+	
				ENLARGEMENT	+++			
			BONE MARROW			ACTIVATION OF HEMATOPOIESIS	++	
			NASAL CAVITY			INFILTRATION OF LEUCOCYTES	+	
			LUNG			CALCIFICATION OF VASCULAR WALL	+	
			SUBLINGUAL GLANDS			INFILTRATION OF LEUCOCYTES (UNILATERAL)	+	
			LIVER	ENLARGEMENT REDDISH CHANGE	++ +			
			KIDNEYS			CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) CALCIFICATION (BILATERAL) PIGMENTATION (BILATERAL) INFILTRATION OF LEUCOCYTES (UNILATERAL)	++ + + +	
			UTERUS			PIGMENTATION	+	
			PITUITARY GLAND			CYST	+	

1) FATE : Y , KILLED ON SCHEDULE 2) GRADE : NEGATIVE NOT PRESENTED 3) GRADE OF MASS :

A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F1-1035 CONTINUED
CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 0 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1035	Y	742	THYROID GLANDS			HYPERPLASIA OF C-CELLS (BILATERAL)	+	
			ADRENAL GLANDS			VACUOLAR DEGENERATION OF CORTICAL CELLS (BILATERAL)	+	
			MAMMARY GLAND			HYPERPLASIA	+	
			BRAIN			PIGMENTATION	+	
			SPINAL CORD			PIGMENTATION	+	

1) FATE : Y , KILLED ON SCHEDULE 2) GRADE : NEGATIVE NOT PRESENTED 3) GRADE OF MASS :
+ , SLIGHT A , SMALL AND/OR SINGULAR
++ , MODERATE B , MEDIAL AND/OR SPORADIC
+++ , SEVERE C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 0 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2) 3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1036	W	694	HEART			HYPERPLASIA OF ENDOCARDIAL CELLS	+	POLYP: UTERUS
			THYMUS			HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	+	SQUAMOUS CELL CARCINOMA : TONGUE
			LYMPH NODES (SUBMAXI.) SPLEEN	ENLARGEMENT	+			
			NASAL CAVITY			HEMOSIDEROSIS	++	
			LARYNGOPHARYNX			INFILTRATION OF LEUCOCYTES	++	
			LUNG			INFILTRATION OF LEUCOCYTES	+	
			TONGUE	ABSCESS	+	CALCIFICATION OF VASCULAR WALL	+	
			SUBMAXILLARY GLANDS			SQUAMOUS CELL CARCINOMA		
			SUBLINGUAL GLANDS			ATROPHY OF ACINAR CELLS (BILATERAL)	+++	
			PAROTID GLANDS			ATROPHY OF ACINAR CELLS (BILATERAL)	+++	
			LIVER			VACUOLAR DEGENERATION (BILATERAL)	+	
			LIVER		++	FATTY DEGENERATION OF HEPATIC CELLS	+++	
						SMALL GRANULOMA	++	
						MACROPHAGE MIGRATION IN PERIVASCULAR AREA	+	
			KIDNEYS			CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL)	+	

1) FATE : W , KILLED IN EXTREMIS				2) GRADE : NEGATIVE NOT PRESENTED		3) GRADE OF MASS :		
				+ , SLIGHT		A , SMALL AND/OR SINGULAR		
				++ , MODERATE		B , MEDIAL AND/OR SPORADIC		
				+++ , SEVERE		C , LARGE AND/OR MULTIPLE		

4) DAYS : AFTER START OF TREATMENT								

LEVEL AND SEX : 0 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1036	W	694	KIDNEYS					
						CALCIFICATION (BILATERAL) PIGMENTATION (BILATERAL) INFILTRATION OF LEUCOCYTES (UNILATERAL)	+	
							+	
							+	
			OVARIES			INFILTRATION OF LEUCOCYTES (UNILATERAL)	++	
			UTERUS			POLYP PIGMENTATION	+	
			VAGINA	ENLARGEMENT	+	INFILTRATION OF LEUCOCYTES	+	
			PITUITARY GLAND	REDDISH CHANGE	+	HYPERPLASIA OF CHROMOPHOBE CELLS	+	
			HARDERIAN GLANDS			INFILTRATION OF LEUCOCYTES (UNILATERAL)	+	
			BRAIN			PIGMENTATION	+	
			SPINAL CORD			PIGMENTATION	+	

11) FATE : W , KILLED IN EXTREMIS

2) GRADE : NEGATIVE NOT PRESENTED

33) GRADE OF MASS :

A / SMALL AND/OR SINGULAR
B / MEDIAL AND/OR SPORADIC
C / LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F1-1037

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 0 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1037	W	721	MULTIPLE ORGANS			MONONUCLEAR CELL LEUKEMIA		ADENOMA: PITUITARY GLAND MONONUCLEAR CELL LEUKEMIA : MULTIPLE ORGANS
			ABDOMINAL CAVITY	HEMORRHAGE	+			
			HEART			FIBROSIS	+	
			THYMUS			ATROPHY	+++	
			SPLEEN	ENLARGEMENT	+++			
			BONE MARROW			ACTIVATION OF HEMATOPOIESIS	++	
			NASAL CAVITY			INFILTRATION OF LEUCOCYTES	++	
			LUNG	HEMORRHAGE	+++	HEMORRHAGE	+	
			SUBMAXILLARY GLANDS			GRANULATION (UNILATERAL)	+	
			LIVER	ROUGHNESS OF SURFACE	++	SMALL GRANULOMA FOCAL NECROSIS	+	
			KIDNEYS			CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) CALCIFICATION (BILATERAL) PIGMENTATION (BILATERAL)	+	
			UTERUS	ENLARGEMENT	++	PIGMENTATION	+	

1) FATE : W , KILLED IN EXTREMIS

2) GRADE : NEGATIVE NOT PRESENTED

3) GRADE OF MASS :

A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F1-1037 CONTINUED
CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 0 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1037	W	721	UTERUS			DILATATION OF DUCT	++	
			VAGINA			INFILTRATION OF LEUCOCYTES	+	
			PITUITARY GLAND	HEMORRHAGE	+	ADENOMA		
			THYROID GLANDS			HYPERPLASIA OF C-CELLS (UNILATERAL)	+	
			HARDERIAN GLANDS			INFILTRATION OF LEUCOCYTES (UNILATERAL)	+	
			BRAIN			HEMORRHAGE	++	
						PIGMENTATION	+	
			SPIRAL CORD			PIGMENTATION	+	

1) FATE : W , KILLED IN EXTREMIS 2) GRADE : NEGATIVE NOT PRESENTED 3) GRADE OF MASS :
+ , SLIGHT A , SMALL AND/OR SINGULAR
++ , MODERATE B , MEDIAL AND/OR SPORADIC
+++ , SEVERE C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F1-1038

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 0 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1038	Y	742	MULTIPLE ORGANS			MONONUCLEAR CELL LEUKEMIA		MONONUCLEAR CELL LEUKEMIA : MULTIPLE ORGANS
			HEART			FIBROSIS	+	
			THYMUS			HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	+	
			LYMPH NODES (PULM.HILUS)			BLOOD ABSORPTION	+	
			SPLEEN	ENLARGEMENT	++	HEMOSIDEROSIS	+	
			NASAL CAVITY			INFILTRATION OF LEUCOCYTES	++	
			LARYNGOPHARYNX			INFILTRATION OF LEUCOCYTES	+	
			LUNG			HISTIOCYTOSIS HEMORRHAGE	+	
			PAROTID GLANDS			REGENERATIVE CHANGE (UNILATERAL)	+	
			LIVER	ENLARGEMENT	++	SMALL GRANULOMA MACROPHAGE MIGRATION IN PERIVASCULAR AREA HYPERPLASTIC NODULE	+	
			PANCREAS			ATROPHY OF PANCREATIC ACINUS	++	
			KIDNEYS			CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL)	+	

1) FATE : Y , KILLED ON SCHEDULE 2) GRADE : NEGATIVE NOT PRESENTED 3) GRADE OF MASS :
+ , SLIGHT A , SMALL AND/OR SINGULAR
++ , MODERATE B , MEDIAL AND/OR SPORADIC
+++ , SEVERE C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F1-1038 CONTINUED
CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 0 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1038	Y	742	KIDNEYS					
			URINARY BLADDER			PIGMENTATION (BILATERAL) INFILTRATION OF LEUCOCYTES (UNILATERAL) CALCIFICATION (BILATERAL)	++ +	
			UTERUS			INFILTRATION OF LEUCOCYTES	+	
						PIGMENTATION INFILTRATION OF LEUCOCYTES	+	
			PITUITARY GLAND			HYPERPLASIA OF CHROMOPHOBE CELLS	++	
			PARATHYROID GLANDS			HYPERPLASIA OF CHIEF CELLS (UNILATERAL)	++	
			ADRENAL GLANDS			ANGIECTASIA (UNILATERAL) VACUOLAR DEGENERATION OF CORTICAL CELLS (UNILATERAL)	+	
			BONE (FEMUR)			HYPEROSTOSIS	++	
			BRAIN			PIGMENTATION	+	
			SPINAL CORD			PIGMENTATION	+	

1) FATE : Y , KILLED ON SCHEDULE

2) GRADE : NEGATIVE NOT PRESENTED

3) GRADE OF MASS :

A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

+ , SLIGHT
++ , MODERATE
+++ , SEVERE

APPENDIX 11-F1-1039

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 0 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1039	Y	742	LYMPH NODES (PULM.-HILUS) SPLEEN			BLOOD ABSORPTION	+	FIBROADENOMA: MAMMARY GLAND
						HEMOSIDEROSIS	++	
						EXTRAMEDULLARY HEMATOPOIESIS	+	
			NASAL CAVITY			INFILTRATION OF LEUCOCYTES	+	
			LUNG			HISTIOCYTOSIS	+	
						ADENOMATOSIS	+	
						CALCIFICATION OF VASCULAR WALL	+	
			LIVER			FATTY DEGENERATION OF HEPATIC CELLS	+	
						FOCAL ATROPHY OF HEPATIC CELLS	+	
						SMALL GRANULOMA	+	
						CHOLANGIOFIBROSIS	+	
			KIDNEYS			CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL)	+	
						INFILTRATION OF LEUCOCYTES (BILATERAL)	+	
						PIGMENTATION (BILATERAL)	+	
						CALCIFICATION (BILATERAL)	+	
			UTERUS			PIGMENTATION	+	
			VAGINA			INFILTRATION OF LEUCOCYTES	+	
			ADRENAL GLANDS			HYPERPLASIA OF GLOMERULOSA CELLS (UNILATERAL)	+	
			SKIN (SUBCUTIS)			INFILTRATION OF LEUCOCYTES	+	

1) FATE : Y , KILLED ON SCHEDULE 2) GRADE : NEGATIVE NOT PRESENTED 3) GRADE OF MASS :
 + , SLIGHT A , SMALL AND/OR SINGULAR
 ++ , MODERATE B , MEDIAL AND/OR SPORADIC
 +++ , SEVERE C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F1-1039 CONTINUED
CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 0 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1039	Y	742	MAMMARY GLAND	MASS	B	FIBROADENOMA		
			EYE BALLS			CALCIFICATION, SCLERA (UNILATERAL)	+	
			HARDERIAN GLANDS			INFILTRATION OF LEUCOCYTES (UNILATERAL)	+	
			BRAIN			PIGMENTATION	+	
			SPINAL CORD			PIGMENTATION	+	

1) FATE : Y , KILLED ON SCHEDULE
2) GRADE : NEGATIVE NOT PRESENTED
3) GRADE OF MASS :
A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE
4) DAYS : AFTER START OF TREATMENT
+ , SLIGHT
++ , MODERATE
+++ , SEVERE

APPENDIX 11-F1-1040

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 0 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1040	Y	743	THYMUS			HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	+	NO SIGNIFICANT LESION
			LYMPH NODES (PULM.HILUS) SPLEEN			BLOOD ABSORPTION	+	
						HEMOSIDEROSIS	++	
						EXTRAMEDULLARY HEMATOPOIESIS	++	
			BONE MARROW			PROLIFERATION OF RETICULAR CELLS	+	
			NASAL CAVITY			INFILTRATION OF LEUCOCYTES	+	
			LARYNGOPHARYNX			HYPERSECRETION	+	
			LUNG			INFILTRATION OF LEUCOCYTES	+	
			PAROTID GLANDS			REGENERATIVE CHANGE (UNILATERAL)	+	
			LIVER			FOCAL ATROPHY OF HEPATIC CELLS	+	
						FATTY DEGENERATION OF HEPATIC CELLS	+	
						SMALL GRANULOMA	+	
						INFILTRATION OF LEUCOCYTES	+	
			KIDNEYS			CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL)	+	
						INFILTRATION OF LEUCOCYTES (BILATERAL)	+	

1) FATE : Y , KILLED ON SCHEDULE

2) GRADE : NEGATIVE NOT PRESENTED

3) GRADE OF MASS : -----

A / SMALL AND/OR SINGULAR
B / MEDIAL AND/OR SPORADIC
C / LARGE AND/OR MULTIPLE

4.) DAYS : AFTER START OF TREATMENT.

APPENDIX 11-F1-1040 CONTINUED
CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 0 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1040	Y	743	KIDNEYS					
			UTERUS			PIGMENTATION (BILATERAL)	+	
			PITUITARY GLAND	ENLARGEMENT HEMORRHAGE	+	PIGMENTATION	+	
					+	HEMORRHAGE	+	
					+	MIGRATION OF HEMOSIDERIN-LADEN CELLS	+	
					+	HYPERPLASIA OF CHROMOPHOBIC CELLS	+	
			THYROID GLANDS			HYPERPLASIA OF C-CELLS (UNILATERAL)	+	
			SKIN	MASS	A	EPIDERMAL CYST	++	
			EYE BALLS			CALCIFICATION, SCLERA (UNILATERAL)	+	
			BRAIN			PIGMENTATION	+	
			SPINAL CORD			PIGMENTATION	+	

1) FATE : Y , KILLED ON SCHEDULE 2) GRADE : NEGATIVE NOT PRESENTED 3) GRADE OF MASS :
+ , SLIGHT A , SMALL AND/OR SINGULAR
++ , MODERATE B , MEDIAL AND/OR SPORADIC
+++ , SEVERE C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F1-1041

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 0 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1041	X	687	THORACIC CAVITY	PLEURAL FLUID (BLOODY) +				PHEOCHROMOCYTOMA: ADRENAL GLANDS
			HEART			FIBROSIS	+	
			SPLEEN			HEMOSIDEROSIS	++	
			NASAL CAVITY			INFILTRATION OF LEUCOCYTES	+	
			LUNG			CALCIFICATION OF VASCULAR WALL CONGESTIVE EDEMA	+	
			LIVER			SMALL GRANULOMA FOCAL ATROPHY OF HEPATIC CELLS	+	
			KIDNEYS			INFILTRATION OF LEUCOCYTES (BILATERAL) PIGMENTATION (BILATERAL) CALCIFICATION (BILATERAL) URINE CAST (UNILATERAL) REGENERATIVE RENAL TUBULE (BILATERAL)	+	
			ADRENAL GLANDS	MASS (UNILATERAL)	B	PHEOCHROMOCYTOMA (UNILATERAL)	+	
			BRAIN			PIGMENTATION	+	
			SPINAL CORD			PIGMENTATION	+	

1) FATE : X , FOUND DEAD

2) GRADE : NEGATIVE NOT PRESENTED
+ , SLIGHT
++ , MODERATE
+++ , SEVERE

3) GRADE OF MASS :

A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F1-1042
CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 0 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1042	Y	743	HEART			FIBROSIS	+	POLYP: UTERUS
			THYMUS			HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	+	FIBROADENOMA: MAMMARY GLAND
			SPLEEN			HEMOSIDEROSIS EXTRAMEDULLARY HEMATOPOIESIS	++ ++	C-CELL ADENOMA: THYROID GLANDS
			BONE MARROW			PROLIFERATION OF RETICULAR CELLS	+	ASTROCYTOMA: BRAIN
			NASAL CAVITY			INFILTRATION OF LEUCOCYTES	+	
			LUNG			HISTIOCYTOSIS	+	
			LIVER			FOCAL ATROPHY OF HEPATIC CELLS SMALL GRANULOMA FATTY DEGENERATION OF HEPATIC CELLS MACROPHAGE MIGRATION IN PERIVASCULAR AREA	++ ++ ++ +	
			KIDNEYS			CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) PIGMENTATION (BILATERAL) CALCIFICATION (BILATERAL) INFILTRATION OF LEUCOCYTES (UNILATERAL)	++ ++ ++ +	
			OVARIES			CYST (UNILATERAL)	++	
			UTERUS			MASS PIGMENTATION	+	

1) FATE : Y , KILLED ON SCHEDULE 2) GRADE : NEGATIVE NOT PRESENTED 3) GRADE OF MASS :
+ , SLIGHT A , SMALL AND/OR SINGULAR
++ , MODERATE B , MEDIAL AND/OR SPORADIC
+++ , SEVERE C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F1-1042 CONTINUED
CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 0 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1042	Y	743	UTERUS					
						POLYP		
			THYROID GLANDS	ENLARGEMENT (UNILATERAL)	+			C-CELL ADENOMA (UNILATERAL)
			ADRENAL GLANDS					
			MAMMARY GLAND	MASS	C			ANGIECTASIA (BILATERAL) +
			EYE BALLS	GRAYISH CHANGE (UNILATERAL)	+++			+++ +++ CATARACT (UNILATERAL) RETINAL ATROPHY (UNILATERAL)
			HARDERIAN GLANDS					INFILTRATION OF LEUCOCYTES (BILATERAL) +
			BRAIN					ASTROCYTOMA PIGMENTATION +
			SPINAL CORD					PIGMENTATION +

1) FATE : Y , KILLED ON SCHEDULE 2) GRADE : NEGATIVE NOT PRESENTED 3) GRADE OF MASS :
+ , SLIGHT A , SMALL AND/OR SINGULAR
++ , MODERATE B , MEDIAL AND/OR SPORADIC
+++ , SEVERE C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F1-1043

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 0 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1043	W	708	MULTIPLE ORGANS	YELLOWISH CHANGE	+	MONONUCLEAR CELL LEUKEMIA		MONONUCLEAR CELL LEUKEMIA
			HEART			ENDOCARDITIS	+	: MULTIPLE ORGANS
			LYMPH NODES (SUBMAXI.)	ENLARGEMENT	+			
			SPLEEN	ENLARGEMENT	+++			
			LUNG			HISTIOCYTOSIS CALCIFICATION OF VASCULAR WALL	+	
			PAROTID GLANDS			ATROPHY OF ACINAR CELLS (UNILATERAL)	+	
			LIVER	ENLARGEMENT ROUGHNESS OF SURFACE YELLOWISH CHANGE	+	PIGMENTATION	+	
			PANCREAS			ATROPHY OF PANCREATIC ACINUS	+	
			KIDNEYS			CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) PIGMENTATION (BILATERAL)	++ +++	
			PITUITARY GLAND	HEMORRHAGE ENLARGEMENT	+	MIGRATION OF HEMOSIDERIN-LADEN CELLS	+	
			BONE (FEMUR)			HEMORRHAGE OSTEOSCLEROSIS	+	

1) FATE : W , KILLED IN EXTREMIS

2) GRADE : NEGATIVE NOT PRESENTED

3) GRADE OF MASS :

A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F1-1044

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 0 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1044	X	636	MULTIPLE ORGANS			MONONUCLEAR CELL LEUKEMIA		MONONUCLEAR CELL LEUKEMIA
			ABDOMINAL CAVITY ASCITES (BLOODY)	+++				: MULTIPLE ORGANS FIBROADENOMA: MAMMARY GLAND
			HEART			FIBROSIS	+	
			SPLEEN	ENLARGEMENT	+++			
			LIVER	NODULE	+			
			PITUITARY GLAND			HEMORRHAGE	+	
			MAMMARY GLAND	MASS	A	FIBROADENOMA		

1) FATE : X / FOUND DEAD 2) GRADE : NEGATIVE NOT PRESENTED 3) GRADE OF MASS :
+ / SLIGHT A / SMALL AND/OR SINGULAR
++ / MODERATE B / MEDIAL AND/OR SPORADIC
+++ / SEVERE C / LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F1-1045

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 0 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1045	W	572	ABDOMINAL CAVITY ASCITES		+++			MESOTHELIOMA: PERITONEUM ADENOMA: PITUITARY GLAND
			PERITONEUM	NODULE	+++	MESOTHELIOMA		
			SPLEEN			EXTRAMEDULLARY HEMATOPOIESIS HEMOSIDEROSIS	++ +	
			LUNG			CALCIFICATION OF VASCULAR WALL	+	
			STOMACH			ULCER	++	
			LIVER	DISCOLORATION	+++	FATTY DEGENERATION OF HEPATIC CELLS	++	
			KIDNEYS	BLACKISH CHANGE (BILATERAL)	+	PIGMENTATION (BILATERAL) CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL)	+++ +	
			PITUITARY GLAND	HEMORRHAGE	++	ADENOMA		
			BONE (FEMUR)			OSTEOSCLEROSIS	++	
			BRAIN			PIGMENTATION	+	

1) FATE : W , KILLED IN EXTREMIS

2) GRADE : NEGATIVE NOT PRESENTED

3) GRADE OF MASS :

A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE+ , SLIGHT
++ , MODERATE
+++ , SEVERE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F1-1046

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 0 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1046	Y	743	HEART			INFILTRATION OF LEUCOCYTES	+	ADENOMA: PITUITARY GLAND
			LYMPH NODES (MESENT.)			ANGIECTASIA	+	
			SPLEEN			HEMOSIDEROSIS	++	
			NASAL CAVITY			INFILTRATION OF LEUCOCYTES	+	
			LIVER			FOCAL ATROPHY OF HEPATIC CELLS SMALL GRANULOMA	++ +	
			PANCREAS			ATROPHY OF PANCREATIC ACINUS	+	
			KIDNEYS			PIGMENTATION (BILATERAL) CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL)	++ +	
			PITUITARY GLAND	ENLARGEMENT HEMORRHAGE	+++ ++	ADENOMA		
			MAMMARY GLAND			HYPERPLASIA	+	
			BRAIN			PIGMENTATION	+	

1) FATE : Y , KILLED ON SCHEDULE

2) GRADE : NEGATIVE NOT PRESENTED

3) GRADE OF MASS :

A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

+ , SLIGHT
++ , MODERATE
+++ , SEVERE

APPENDIX 11-F1-1047

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 0 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1047	Y	743	HEART			FIBROSIS	+	ADENOMA: UTERUS
			SPLEEN			HEMOSIDEROSIS	++	
			CECUM			GRANULATION	+	
			LIVER			INFILTRATION OF LEUCOCYTES FOCAL ATROPHY OF HEPATIC CELLS	+	
			KIDNEYS			CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) PIGMENTATION (BILATERAL)	++	
			UTERUS			ADENOMA	++	
			PITUITARY GLAND	ENLARGEMENT HEMORRHAGE	+	CONGESTION	+	
			THYROID GLANDS			HYPERPLASIA OF C-CELLS (UNILATERAL)	+	
			ADRENAL GLANDS			HYPERPLASTIC NODULE (UNILATERAL)	+	
			MAMMARY GLAND			DILATATION OF GLAND	+	
			EYE BALLS	GRAYISH CHANGE (UNILATERAL)	+++	CATARACT (UNILATERAL) RETINAL ATROPHY (UNILATERAL)	+	
			HARDERIAN GLANDS			INFILTRATION OF LEUCOCYTES (BILATERAL)	+	

1) FATE : Y , KILLED ON SCHEDULE

2) GRADE : NEGATIVE NOT PRESENTED

3) GRADE OF MASS :

A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F1-1047 CONTINUED
 CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
 OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 0 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1047	Y	743	SPINAL CORD			CYST	+	

1) FATE : Y , KILLED ON SCHEDULE
 4) DAYS : AFTER START OF TREATMENT
 2) GRADE : NEGATIVE NOT PRESENTED
 + , SLIGHT
 ++ , MODERATE
 +++ , SEVERE
 3) GRADE OF MASS :
 A , SMALL AND/OR SINGULAR
 B , MEDIAL AND/OR SPORADIC
 C , LARGE AND/OR MULTIPLE

APPENDIX 11-F1-1048

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 0 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1048	Y	743	HEART			FIBROSIS	+	NO SIGNIFICANT LESION
			LYMPH NODES (MESENT.) SPLEEN			ANGIECTASIA	+	
						HEMOSIDEROSIS	++	
			SUBLINGUAL GLANDS LIVER			FIBROSIS (UNILATERAL)	+	
						FOCAL ATROPHY OF HEPATIC CELLS	++	
						PROLIFERATION OF BILE DUCT	+	
						FATTY DEGENERATION OF HEPATIC CELLS	+	
			PANCREAS			ATROPHY OF PANCREATIC ACINUS	+	
			KIDNEYS			CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) PIGMENTATION (BILATERAL) CALCIFICATION (UNILATERAL)	++ ++ +	

1) FATE : Y , KILLED ON SCHEDULE 2) GRADE : NEGATIVE NOT PRESENTED 3) GRADE OF MASS :
+ , SLIGHT A , SMALL AND/OR SINGULAR
++ , MODERATE B , MEDIAL AND/OR SPORADIC
+++ , SEVERE C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F1-1049

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 0 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1049	W	686	ABDOMINAL CAVITY	HEMORRHAGE	+++			HISTIOCYTOSIS: MULTIPLE ORGANS
			HEART			FIBROSIS	+	
			LYMPH NODES (SUBMAXI.)			INCREASE OF PLASMA CELLS PROLIFERATION OF RETICULAR CELLS	+ ++	
			LYMPH NODES (MESENT.)			PROLIFERATION OF RETICULAR CELLS HISTIOCYTOSIS	+ +	
			SPLEEN			HEMOSIDEROSIS CONGESTION ATROPHY	++ ++ +	
			BONE MARROW			ACTIVATION OF HEMATOPOIESIS HISTIOCYTOSIS	+++ +	
			NASAL CAVITY			HYPERSECRETION	+	
			LARYNGOPHARYNX			INFLAMMATION	+	
			LUNG	WHITISH PATCH	+++	HISTIOCYTOSIS	+++	
			LIVER	WHITISH PATCH	++	PROLIFERATION OF KUPFFER CELLS CYST PROLIFERATION OF BILE DUCT	+++ + +	
			PANCREAS			ATROPHY OF PANCREATIC ACINUS	+	
			KIDNEYS			PIGMENTATION (BILATERAL)	+++	

1) FATE : W , KILLED IN EXTREMIS

2) GRADE : NEGATIVE NOT PRESENTED

3) GRADE OF MASS :

A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE

+ , SLIGHT

++ , MODERATE

+++ , SEVERE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F1-1049 CONTINUED
CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 0 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1049	W	686	KIDNEYS					
			URINARY BLADDER			CALCIFICATION (BILATERAL) HYALINE DROPLET DEGENERATION (BILATERAL)	+	
			OVARIES			INFLAMMATION	+	
			UTERUS			ATROPHY (BILATERAL)	++	
			PITUITARY GLAND	HEMORRHAGE ENLARGEMENT	+	HISTIOCYTOSIS	+	
			THYROID GLANDS			HYPERPLASIA OF CHROMOPHOBIC CELLS HEMORRHAGE	+	
			ADRENAL GLANDS	ENLARGEMENT (UNILATERAL)	+	HYPERPLASIA OF C-CELLS (UNILATERAL)	+	
			MUSCLE (Q. FEMORIS)			CONGESTION (BILATERAL) SWELLING OF CORTICAL CELLS (BILATERAL)	+	
			SKIN			HYPERPLASIA OF MEDULLARY CELLS (BILATERAL)	+	
			HARDERIAN GLANDS			HISTIOCYTOSIS	+	
			BRAIN	IMPRESSION	+	HISTIOCYTOSIS HEMORRHAGE	+++ ++	
						ATROPHY (BILATERAL)	+	

1) FATE : W , KILLED IN EXTREMIS 2) GRADE : NEGATIVE NOT PRESENTED 3) GRADE OF MASS :
+ , SLIGHT A , SMALL AND/OR SINGULAR
++ , MODERATE B , MEDIAL AND/OR SPORADIC
+++ , SEVERE C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F1-1049 CONTINUED

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 0 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
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1049	W	686	BRAIN			PIGMENTATION	+	
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1) FATE : W , KILLED IN EXTREMIS	2) GRADE : NEGATIVE NOT PRESENTED + , SLIGHT ++ , MODERATE +++ , SEVERE	3) GRADE OF MASS : A , SMALL AND/OR SINGULAR B , MEDIAL AND/OR SPORADIC C , LARGE AND/OR MULTIPLE
4) DAYS : AFTER START OF TREATMENT		

APPENDIX 11-F1-1050

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 0 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1050	W	499	MULTIPLE ORGANS	DISCOLORATION	+	MONONUCLEAR CELL LEUKEMIA		BASAL CELL TUMOR: SKIN MONONUCLEAR CELL LEUKEMIA : MULTIPLE ORGANS
			HEART			FIBROSIS	+	
			SPLEEN	ENLARGEMENT	+			
			LIVER	NODULE ENLARGEMENT	+++ +++			FATTY DEGENERATION OF HEPATIC CELLS +++
			KIDNEYS	BLACKISH CHANGE (BILATERAL)	+			PIGMENTATION (BILATERAL) +++ CALCIFICATION (UNILATERAL) + CHRONIC PROGRESSIVE + GLOMERULONEPHROPATHY (BILATERAL)
			UTERUS	HEMORRHAGE	+			
			VAGINA			INFLAMMATION	+	
			PITUITARY GLAND	DISCOLORATION	++			
			SKIN	NODULE	+	BASAL CELL TUMOR		
			BRAIN	DISCOLORATION	++			

1) FATE : W , KILLED IN EXTREMIS

2) GRADE : NEGATIVE NOT PRESENTED

3) GRADE OF MASS :

A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

+ , SLIGHT
++ , MODERATE
+++ , SEVERE

APPENDIX 11-F1-1051

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : O PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1051	W	733	MULTIPLE ORGANS			MONONUCLEAR CELL LEUKEMIA		MONONUCLEAR CELL LEUKEMIA
			THORACIC CAVITY	PLEURAL FLUID	+			: MULTIPLE ORGANS
			HEART			FIBROSIS	+	ADENOMA: MAMMARY GLAND
			LYMPH NODES (GENERAL)	ENLARGEMENT	++			
			SPLEEN	ENLARGEMENT	++			
			LARYNGOPHARYNX			INFLAMMATION	++	
			LUNG	HEMORRHAGE	++	HISTIOCYTOSIS	+	
			LIVER	ROUGHNESS OF SURFACE	++	CHOLANGIOFIBROSIS	+	
			KIDNEYS			PIGMENTATION (BILATERAL)	+++	
			OVARIES	ATROPHY (UNILATERAL)	+	ATROPHY (UNILATERAL)	++	
			PITUITARY GLAND	ENLARGEMENT HEMORRHAGE	+	HYPERPLASIA OF CHROMOPHOBE CELLS	++	
			ADRENAL GLANDS	WHITISH PATCH (UNILATERAL)	+	CONGESTION (BILATERAL)	++	
			MAMMARY GLAND	MASS	B	ADENOMA		

1) FATE : W , KILLED IN EXTREMIS

2) GRADE : NEGATIVE NOT PRESENTED

3) GRADE OF MASS :

A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

+ , SLIGHT
++ , MODERATE
+++ , SEVERE

APPENDIX 11-F1-1052
CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 0 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1052	Y	743	LYMPH NODES (SUBMAXI.) SPLEEN			INCREASE OF PLASMA CELLS HEMOSIDEROSIS CONGESTION	++ +++ +	ADENOMA: PITUITARY GLAND PHEOCHROMOCYTOMA: ADRENAL GLANDS
			BONE MARROW			ACTIVATION OF HEMATOPOIESIS	++	
			NASAL CAVITY			INFLAMMATION	++	
			LIVER			FOCAL ATROPHY OF HEPATIC CELLS SMALL GRANULOMA FATTY DEGENERATION OF HEPATIC CELLS	+ ++ +	
			PANCREAS			ATROPHY OF PANCREATIC ACINUS	+	
			KIDNEYS	ROUGHNESS OF SURFACE (BILATERAL)	++	CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) PIGMENTATION (BILATERAL)	++ ++	
			OVARIES			ATROPHY (BILATERAL)	+	
			PITUITARY GLAND	ENLARGEMENT HEMORRHAGE	+++ ++	ADENOMA		
			THYROID GLANDS			HYPERPLASIA OF C-CELLS (BILATERAL)	+	
			ADRENAL GLANDS			NECROSIS (UNILATERAL) PHEOCHROMOCYTOMA (BILATERAL)	+++	
			MAMMARY GLAND			HYPERPLASIA	+	

1) FATE : Y , KILLED ON SCHEDULE 2) GRADE : NEGATIVE NOT PRESENTED 3) GRADE OF MASS :
+ , SLIGHT A , SMALL AND/OR SINGULAR
++ , MODERATE B , MEDIAL AND/OR SPORADIC
+++ , SEVERE C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F1-1052 CONTINUED
 CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
 OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 0 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	2) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1052	Y	743	BRAIN	IMPRESSION	+	DILATATION OF CEREBRAL VENTRICLE	++	

1) FATE : Y , KILLED ON SCHEDULE
 2) GRADE : NEGATIVE NOT PRESENTED
 3) GRADE OF MASS :
 A , SMALL AND/OR SINGULAR
 B , MEDIAL AND/OR SPORADIC
 C , LARGE AND/OR MULTIPLE
 4) DAYS : AFTER START OF TREATMENT
 2) GRADE :
 + , SLIGHT
 ++ , MODERATE
 +++ , SEVERE

APPENDIX 11-F2-1101

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 10 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1101	Y	740	KIDNEYS	ROUGHNESS OF SURFACE (BILATERAL)	+	CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) PIGMENTATION (BILATERAL)	++ +	
			PITUITARY GLAND	ENLARGEMENT HEMORRHAGE	+++ ++			
			ADRENAL GLANDS	ENLARGEMENT (UNILATERAL)	+	ANGIECTASIA (UNILATERAL)	++	

1) FATE : Y , KILLED ON SCHEDULE	2) GRADE : NEGATIVE NOT PRESENTED + , SLIGHT ++ , MODERATE +++ , SEVERE	3) GRADE OF MASS : A , SMALL AND/OR SINGULAR B , MEDIAL AND/OR SPORADIC C , LARGE AND/OR MULTIPLE
4) DAYS : AFTER START OF TREATMENT		

APPENDIX 11-F2-1102
CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 10 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1102	Y	740	KIDNEYS			PIGMENTATION (BILATERAL) URINE CAST (BILATERAL)	+	
			ADRENAL GLANDS			ANGIECTASIA (UNILATERAL) INFILTRATION OF LEUCOCYTES (UNILATERAL)	+	

1) FATE : Y , KILLED ON SCHEDULE 2) GRADE : NEGATIVE NOT PRESENTED 3) GRADE OF MASS :
+ , SLIGHT A , SMALL AND/OR SINGULAR
++ , MODERATE B , MEDIAL AND/OR SPORADIC
+++ , SEVERE C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F2-1103
CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 10 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1103	Y	740	KIDNEYS			CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) PIGMENTATION (BILATERAL) CALCIFICATION (BILATERAL) INFILTRATION OF LEUCOCYTES (BILATERAL)	+	
			PITUITARY GLAND	ENLARGEMENT HEMORRHAGE	+			
			ADRENAL GLANDS			HYPERPLASIA OF GLOMERULOSA CELLS (UNILATERAL) HYPERPLASIA OF MEDULLARY CELLS (UNILATERAL)	+	
			MAMMARY GLAND	MASS	C			

1) FATE : Y , KILLED ON SCHEDULE 2) GRADE : NEGATIVE NOT PRESENTED 3) GRADE OF MASS :
+ , SLIGHT A , SMALL AND/OR SINGULAR
++ , MODERATE B , MEDIAL AND/OR SPORADIC
+++ , SEVERE C , LARGE AND/OR MULTIPLE

APPENDIX 11-F2-1104

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 10 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1104	Y	740	KIDNEYS			PIGMENTATION (BILATERAL) CALCIFICATION (BILATERAL) INFILTRATION OF LEUCOCYTES (UNILATERAL) URINE CAST (BILATERAL) REGENERATIVE RENAL TUBULE (BILATERAL)	+ + + + +	
			OVARIES	NODULE (UNILATERAL)	++			
			PITUITARY GLAND	HEMORRHAGE	+			
			SKIN (SUBCUTIS)	MASS	C			

1) FATE : Y , KILLED ON SCHEDULE 2) GRADE : NEGATIVE NOT PRESENTED 3) GRADE OF MASS :
 + , SLIGHT A , SMALL AND/OR SINGULAR
 ++ , MODERATE B , MEDIAL AND/OR SPORADIC
 +++ , SEVERE C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F2-1106

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 10 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1106	Y	740	KIDNEYS			PIGMENTATION (BILATERAL) CALCIFICATION (BILATERAL) INFILTRATION OF LEUCOCYTES (UNILATERAL) REGENERATIVE RENAL TUBULE (UNILATERAL) URINE CAST (BILATERAL)	++ + + + +	
			UTERUS	ENLARGEMENT	+			
			ADRENAL GLANDS			VACUOLAR DEGENERATION OF CORTICAL CELLS (UNILATERAL)	+	

1) FATE : Y , KILLED ON SCHEDULE				2) GRADE : NEGATIVE NOT PRESENTED + , SLIGHT ++ , MODERATE +++ , SEVERE		3) GRADE OF MASS : A , SMALL AND/OR SINGULAR B , MEDIAL AND/OR SPORADIC C , LARGE AND/OR MULTIPLE		
4) DAYS : AFTER START OF TREATMENT								

APPENDIX 11-F2-1107

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 10 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1107	Y	740	COLON	NODULE	++			
			LIVER	YELLOWISH CHANGE	++			
			KIDNEYS			CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) PIGMENTATION (BILATERAL) INFILTRATION OF LEUCOCYTES (BILATERAL)	++ ++ +	
			PITUITARY GLAND	ENLARGEMENT HEMORRHAGE	+++ ++			
			BRAIN	IMPRESSION	+			

1) FATE : Y , KILLED ON SCHEDULE

2) GRADE : NEGATIVE NOT PRESENTED
+ , SLIGHT
++ , MODERATE
+++ , SEVERE

3) GRADE OF MASS :
A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F2-1108

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 10 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	2) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1108	Y	740	LIVER KIDNEYS	YELLOWISH CHANGE	++			
						CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) PIGMENTATION (BILATERAL) INFILTRATION OF LEUCOCYTES (BILATERAL)	+	
							+	
							+	

1) FATE : Y , KILLED ON SCHEDULE	2) GRADE : NEGATIVE NOT PRESENTED + , SLIGHT ++ , MODERATE +++ , SEVERE	3) GRADE OF MASS : A , SMALL AND/OR SINGULAR B , MEDIAL AND/OR SPORADIC C , LARGE AND/OR MULTIPLE
4) DAYS : AFTER START OF TREATMENT		

APPENDIX 11-F2-1109

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 10 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1109	Y	740	KIDNEYS			PIGMENTATION (BILATERAL) INFILTRATION OF LEUCOCYTES (UNILATERAL) CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL)	+	
			UTERUS		+++			
			ADRENAL GLANDS			VACUOLAR DEGENERATION OF CORTICAL CELLS (UNILATERAL)	+	
			SKIN (SUBCUTIS)	MASS	C			

1) FATE : Y , KILLED ON SCHEDULE 2) GRADE : NEGATIVE NOT PRESENTED 3) GRADE OF MASS :
+ , SLIGHT A , SMALL AND/OR SINGULAR
++ , MODERATE B , MEDIAL AND/OR SPORADIC
+++ , SEVERE C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F2-1110

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 10 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1110	X	686	MULTIPLE ORGANS			MONONUCLEAR CELL LEUKEMIA		ADENOMA: PITUITARY GLAND MONONUCLEAR CELL LEUKEMIA : MULTIPLE ORGANS
			HEART			FIBROSIS	+	
			SPLEEN	ENLARGEMENT	+++			
			LUNG	HEMORRHAGE	+	HEMORRHAGE	+	
			LIVER	ENLARGEMENT CONGESTION	+++ +	CONGESTION	+	
			KIDNEYS			URINE CAST (BILATERAL) PIGMENTATION (BILATERAL) CALCIFICATION (BILATERAL)	++ ++ +	
			PITUITARY GLAND	ENLARGEMENT HEMORRHAGE	+ +	ADENOMA		

1) FATE : X , FOUND DEAD
2) GRADE : NEGATIVE NOT PRESENTED
3) GRADE OF MASS :
A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE
4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F2-1111

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 10 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1111	Y	740	KIDNEYS			CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) PIGMENTATION (BILATERAL) INFILTRATION OF LEUCOCYTES (BILATERAL) CALCIFICATION (UNILATERAL)	+	
			PITUITARY GLAND	ENLARGEMENT HEMORRHAGE	++ +			
			ADRENAL GLANDS			VACUOLAR DEGENERATION OF CORTICAL CELLS (UNILATERAL)	+	

1) FATE : Y , KILLED ON SCHEDULE 2) GRADE : NEGATIVE NOT PRESENTED 3) GRADE OF MASS :
+ , SLIGHT A , SMALL AND/OR SINGULAR
++ , MODERATE B , MEDIAL AND/OR SPORADIC
+++ , SEVERE C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F2-1112

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 10 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1112	W 550	SPLEEN			HEMOSIDEROSIS EXTRAMEDULLARY HEMATOPOIESIS	++ +	ADENOMA: PITUITARY GLAND
		LIVER	YELLOWISH CHANGE ENLARGEMENT	++ +	FATTY DEGENERATION OF HEPATIC CELLS SMALL GRANULOMA	++ +	
		KIDNEYS	ROUGHNESS OF SURFACE (BILATERAL)	+	CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) PIGMENTATION (BILATERAL) INFILTRATION OF LEUCOCYTES (BILATERAL) CALCIFICATION (BILATERAL)	+++ + + + +	
		PITUITARY GLAND	ENLARGEMENT	+++	ADENOMA		
		THYROID GLANDS			HYPERPLASIA OF C-CELLS (UNILATERAL)	+	
		SKIN	MASS	A			
		BRAIN	IMPRESSION	+	ATROPHY DILATATION OF CEREBRAL VENTRICLE	+++ ++	

1) FATE : W , KILLED IN EXTREMIS

2) GRADE : NEGATIVE NOT PRESENTED

+ , SLIGHT
++ , MODERATE
+++ , SEVERE

3) GRADE OF MASS :

A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F2-1113

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 10 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1113	Y	741	LUNG	NODULE	+			
			KIDNEYS					
						INFILTRATION OF LEUCOCYTES (BILATERAL)	++	
						PIGMENTATION (BILATERAL)	+	
						CALCIFICATION (BILATERAL)	+	
						CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL)	+	
			ADRENAL GLANDS			VACUOLAR DEGENERATION OF CORTICAL CELLS (UNILATERAL)	+	

1) FATE : Y , KILLED ON SCHEDULE	2) GRADE : NEGATIVE NOT PRESENTED + , SLIGHT ++ , MODERATE +++ , SEVERE	3) GRADE OF MASS : A , SMALL AND/OR SINGULAR B , MEDIAL AND/OR SPORADIC C , LARGE AND/OR MULTIPLE
4) DAYS : AFTER START OF TREATMENT		

APPENDIX 11-F2-1114
 CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
 OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 10 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1114	Y	741	KIDNEYS			URINE CAST (BILATERAL) PIGMENTATION (BILATERAL) CALCIFICATION (UNILATERAL)	+	
			ADRENAL GLANDS			VACUOLAR DEGENERATION OF CORTICAL CELLS (BILATERAL)	+	

1) FATE : Y , KILLED ON SCHEDULE	2) GRADE : NEGATIVE NOT PRESENTED + , SLIGHT ++ , MODERATE +++ , SEVERE	3) GRADE OF MASS : A , SMALL AND/OR SINGULAR B , MEDIAL AND/OR SPORADIC C , LARGE AND/OR MULTIPLE
4) DAYS : AFTER START OF TREATMENT		

APPENDIX 11-F2-1115
CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 10 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1115	Y	741	HEART	NODULE	+			
			SPLEEN	ENLARGEMENT	++			
			KIDNEYS			PIGMENTATION (BILATERAL) URINE CAST (BILATERAL) INFILTRATION OF LEUCOCYTES (BILATERAL) CALCIFICATION (BILATERAL)	+ + + +	
			PITUITARY GLAND	HEMORRHAGE	+			
			ADRENAL GLANDS			VACUOLAR DEGENERATION OF CORTICAL CELLS (UNILATERAL)	+	
			MAMMARY GLAND	MASS	C			

1) FATE : Y , KILLED ON SCHEDULE 2) GRADE : NEGATIVE NOT PRESENTED 3) GRADE OF MASS :
+ , SLIGHT A , SMALL AND/OR SINGULAR
++ , MODERATE B , MEDIAL AND/OR SPORADIC
+++ , SEVERE C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F2-1116

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 10 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1116	Y	741	KIDNEYS			CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) PIGMENTATION (BILATERAL) INFILTRATION OF LEUCOCYTES (BILATERAL) CALCIFICATION (BILATERAL)	+	
			OVARIES	EDEMA (UNILATERAL)	+			
			PITUITARY GLAND	ENLARGEMENT HEMORRHAGE	++ +			
			ADRENAL GLANDS			VACUOLAR DEGENERATION OF CORTICAL CELLS (UNILATERAL)	+	

1) FATE : Y , KILLED ON SCHEDULE

2) GRADE : NEGATIVE NOT PRESENTED

3) GRADE OF MASS :

A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE+ , SLIGHT
++ , MODERATE
+++ , SEVERE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F2-1117

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 10 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1117	Y	741	SPLEEN	ENLARGEMENT	+			
			KIDNEYS			CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) PIGMENTATION (BILATERAL) CALCIFICATION (BILATERAL) INFILTRATION OF LEUCOCYTES (BILATERAL)	+	
			UTERUS	ENLARGEMENT HEMORRHAGE	+			

1) FATE : Y , KILLED ON SCHEDULE 2) GRADE : NEGATIVE NOT PRESENTED 3) GRADE OF MASS :
+ , SLIGHT A , SMALL AND/OR SINGULAR
++ , MODERATE B , MEDIAL AND/OR SPORADIC
+++ , SEVERE C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F2-1118

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 10 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1118	Y	741	KIDNEYS			PIGMENTATION (BILATERAL) URINE CAST (BILATERAL) INFILTRATION OF LEUCOCYTES (UNILATERAL) CALCIFICATION (UNILATERAL)	+ + + +	

PITUITARY GLAND ENLARGEMENT
HEMORRHAGE

+++
++

1) FATE : Y , KILLED ON SCHEDULE

2) GRADE : NEGATIVE NOT PRESENTED

3) GRADE OF MASS :

4) DAYS : AFTER START OF TREATMENT

A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE

++ , SLIGHT
++ , MODERATE
+++ , SEVERE

APPENDIX 11-F2-1119
CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 10 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1119	W	561	MULTIPLE ORGANS	YELLOWISH CHANGE	+++	MONONUCLEAR CELL LEUKEMIA		MONONUCLEAR CELL LEUKEMIA
			THORACIC CAVITY	PLEURAL FLUID	+			: MULTIPLE ORGANS
			HEART			FIBROSIS	+	
			SPLEEN	ENLARGEMENT	+++			
			LUNG	DISCOLORATION	+	OSSEOUS TISSUE	+	
			LIVER	ROUGHNESS OF SURFACE YELLOWISH CHANGE	+	FATTY DEGENERATION OF HEPATIC CELLS	+++	
			KIDNEYS					
						PIGMENTATION (BILATERAL) INFILTRATION OF LEUCOCYTES (UNILATERAL) URINE CAST (BILATERAL) CALCIFICATION (BILATERAL)	++ + + +	
			PITUITARY GLAND	ENLARGEMENT HEMORRHAGE	++ +	HEMORRHAGE MIGRATION OF HEMOSIDERIN-LADEN CELLS	+ +	
			ADRENAL GLANDS			CONGESTION (UNILATERAL)	++	
			MAMMARY GLAND	ENLARGEMENT	+	HYPERPLASIA	++	

1) FATE : W / KILLED IN EXTREMIS

2) GRADE : NEGATIVE NOT PRESENTED
+ , SLIGHT
++ , MODERATE
+++ , SEVERE

3) GRADE OF MASS :
A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F2-1120

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 10 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1120	W	659	MULTIPLE ORGANS			MONONUCLEAR CELL LEUKEMIA		MONONUCLEAR CELL LEUKEMIA
			HEART			FIBROSIS	+	: MULTIPLE ORGANS FIBROADENOMA: MAMMARY GLAND
			LYMPH NODES (SUBMAXI.)					
			LYMPH NODES (MESENT.)			ENLARGEMENT HEMORRHAGE	+	POLYP: UTERUS
							+	ADENOMA: PITUITARY GLAND
			SPLEEN			ENLARGEMENT	+++	
			LIVER			ROUGHNESS OF SURFACE ENLARGEMENT REDDISH CHANGE	+	
							+	
			KIDNEYS					
						URINE CAST (BILATERAL) PIGMENTATION (BILATERAL) CALCIFICATION (UNILATERAL)	+	
							+	
			UTERUS			POLYP		
			PITUITARY GLAND			ENLARGEMENT HEMORRHAGE	+++ +	
						ADENOMA		
			ADRENAL GLANDS			NODULE (UNILATERAL)	+	
						VACUOLAR DEGENERATION OF CORTICAL CELLS (UNILATERAL)	+++	
			MAMMARY GLAND			MASS	C	
						FIBROADENOMA		
			BRAIN			PIGMENTATION	+	

1) FATE : W , KILLED IN EXTREMIS

2) GRADE : NEGATIVE NOT PRESENTED

3) GRADE OF MASS :

A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F2-1121

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 10 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1121	W	687	HEART			FIBROSIS	+	ADENOMA: PITUITARY GLAND
			SPLEEN	ENLARGEMENT	++	EXTRAMEDULLARY HEMATOPOIESIS	+++	FIBROADENOMA: MAMMARY GLAND
			BONE MARROW			ACTIVATION OF HEMATOPOIESIS	+++	
			LARYNGOPHARYNX			CYSTIC DILATATION OF GLAND	+	
			LUNG	NODULE	+	ADENOMATOSIS	+	
			LIVER			FOCAL ATROPHY OF HEPATIC CELLS EXTRAMEDULLARY HEMATOPOIESIS	++	
			KIDNEYS			URINE CAST (BILATERAL) INFILTRATION OF LEUCOCYTES (UNILATERAL) CALCIFICATION (BILATERAL) REGENERATIVE RENAL TUBULE (UNILATERAL)	+	
			PITUITARY GLAND	ENLARGEMENT HEMORRHAGE	++ +	ADENOMA	+	
			THYROID GLANDS			HYPERPLASIA OF C-CELLS (BILATERAL)	+	
			ADRENAL GLANDS			CONGESTION (UNILATERAL) VACUOLAR DEGENERATION OF CORTICAL CELLS (UNILATERAL)	++ ++	
			MAMMARY GLAND	MASS	C	FIBROADENOMA		

1) FATE : W , KILLED IN EXTREMIS

2) GRADE : NEGATIVE NOT PRESENTED

+ , SLIGHT
++ , MODERATE
+++ , SEVERE

3) GRADE OF MASS :

A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F2-1121 CONTINUED

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 10 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1121	W	687	BRAIN	IMPRESSION	+			

1) FATE : W / KILLED IN EXTREMIS

2) GRADE : NEGATIVE NOT PRESENTED

3) GRADE OF MASS :

4) DAYS : AFTER START OF TREATMENT

A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE

+

SLIGHT

++ , MODERATE

+++ , SEVERE

APPENDIX 11-F2-1122

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 10 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1122	W	676	SPLEEN	ENLARGEMENT	+++	EXTRAMEDULLARY HEMATOPOIESIS	+++	ADENOCARCINOMA: CLITORAL GLAND
			LUNG	DISCOLORATION	+			ADENOCARCINOMA: KIDNEYS
			LIVER	DISCOLORATION	+++	FOCAL NECROSIS	++	
			KIDNEYS	WHITISH PATCH (UNILATERAL)	+	PIGMENTATION (BILATERAL) URINE CAST (BILATERAL) CALCIFICATION (BILATERAL) ADENOCARCINOMA (UNILATERAL)	++ + +	
			VAGINA	ADHESION	+			
			CLITORAL GLAND	MASS	C	ADENOCARCINOMA		
			PITUITARY GLAND			CONGESTION	+	
			ADRENAL GLANDS			HYPERPLASIA OF MEDULLARY CELLS (UNILATERAL)	+	
			BONE (FEMUR)			OSTEOSCLEROSIS	++	

1) FATE : W / KILLED IN EXTREMIS

2) GRADE : NEGATIVE NOT PRESENTED
+ , SLIGHT
++ , MODERATE
+++ , SEVERE

3) GRADE OF MASS :
A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F2-1123

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 10 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1123	Y	741	KIDNEYS			CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) CALCIFICATION (BILATERAL) PIGMENTATION (BILATERAL)	+	
			ADRENAL GLANDS			VACUOLAR DEGENERATION OF CORTICAL CELLS (UNILATERAL)	+	

1) FATE : Y , KILLED ON SCHEDULE

2) GRADE : NEGATIVE NOT PRESENTED
+ , SLIGHT
++ , MODERATE
+++ , SEVERE

3) GRADE OF MASS :
A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F2-1124
CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 10 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1124	W	735	MULTIPLE ORGANS			MONONUCLEAR CELL LEUKEMIA		MONONUCLEAR CELL LEUKEMIA
			HEART			FIBROSIS	+	: MULTIPLE ORGANS
			THYMUS			HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	++	FIBROADENOMA: MAMMARY GLAND
			SPLEEN	ENLARGEMENT NODULE	+++ +	CAPSULITIS	++	
			BONE MARROW			ACTIVATION OF HEMATOPOIESIS	+++	
			LIVER	ATROPHY ROUGHNESS OF SURFACE	+	EXTRAMEDULLARY HEMATOPOIESIS HYPERPLASTIC NODULE	+	
			PANCREAS		+	ATROPHY OF PANCREATIC ACINUS	++	
			KIDNEYS			CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) PIGMENTATION (BILATERAL) INFILTRATION OF LEUCOCYTES (BILATERAL) CALCIFICATION (BILATERAL)	+	
			UTERUS	ENLARGEMENT	++	DILATATION OF DUCT INFILTRATION OF LEUCOCYTES	++	
			PITUITARY GLAND	HEMORRHAGE	+	HEMORRHAGE	+	

1) FATE : W , KILLED IN EXTREMIS

2) GRADE : NEGATIVE NOT PRESENTED

3) GRADE OF MASS :

A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

+ , SLIGHT
++ , MODERATE
+++ , SEVERE

APPENDIX 11-F2-1124 CONTINUED

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 10 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1124	W	735	PITUITARY GLAND			MIGRATION OF HEMOSIDERIN-LADEN CELLS	+	
			ADRENAL GLANDS			CONGESTION (BILATERAL) VACUOLAR DEGENERATION OF CORTICAL CELLS (UNILATERAL)	+	
			MAMMARY GLAND	MASS	B	FIBROADENOMA		

1) FATE : W / KILLED IN EXTREMIS

2) GRADE : NEGATIVE NOT PRESENTED

3) GRADE OF MASS :

A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

+, SLIGHT
++, MODERATE
+++, SEVERE

APPENDIX 11-F2-1125
CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 10 PPM FEMALE

STUDY NO. 83004							
ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE
PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS							
1125	Y	741	KIDNEYS			CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) PIGMENTATION (BILATERAL) INFILTRATION OF LEUCOCYTES (BILATERAL)	++ ++ +
			PITUITARY GLAND	ENLARGEMENT HEMORRHAGE	+++ ++		
			ADRENAL GLANDS			MIGRATION OF MACROPHAGE (UNILATERAL)	+

1) FATE : Y / KILLED ON SCHEDULE 2) GRADE : NEGATIVE NOT PRESENTED 3) GRADE OF MASS :
+ / SLIGHT A / SMALL AND/OR SINGULAR
++ / MODERATE B / MEDIAL AND/OR SPORADIC
+++ / SEVERE C / LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F2-1126
CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 10 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1126	Y	741	SPLEEN	ENLARGEMENT	++			
			LIVER	ENLARGEMENT YELLOWISH CHANGE	+			
			KIDNEYS	IMPRESSION (UNILATERAL)	+	CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) PIGMENTATION (BILATERAL) INFILTRATION OF LEUCOCYTES (BILATERAL) CALCIFICATION (UNILATERAL)	++ ++ + +	
			OVARIES	CYST (UNILATERAL)	+			
			PITUITARY GLAND	ENLARGEMENT	+			
			ADRENAL GLANDS			EXTRAMEDULLARY HEMATOPOIESIS (BILATERAL) PNEOCHROMOCYTOMA (UNILATERAL)	+	
			MAMMARY GLAND	MASS	C			

1) FATE : Y , KILLED ON SCHEDULE 2) GRADE : NEGATIVE NOT PRESENTED 3) GRADE OF MASS :
+ , SLIGHT A , SMALL AND/OR SINGULAR
++ , MODERATE B , MEDIAL AND/OR SPORADIC
+++ , SEVERE C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F2-1127

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 10 PPM FEMALE

STUDY NO. 83004							
ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE
PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS							
1127	W	638	HEART			FIBROSIS	+
			SPLEEN			HEMOSIDEROSIS	+++
						EXTRAMEDULLARY HEMATOPOIESIS	+
			LARYNGOPHARYNX				
			LIVER			CYSTIC DILATATION OF GLAND	+
						FATTY DEGENERATION OF HEPATIC CELLS	++
						SMALL GRANULOMA	+
			KIDNEYS				
						CHRONIC PROGRESSIVE	++
						GLOMERULONEPHROPATHY (BILATERAL)	
						INFILTRATION OF LEUCOCYTES	+
						(BILATERAL)	
						PIGMENTATION (BILATERAL)	++
						CALCIFICATION (BILATERAL)	+
			BONE (FEMUR)				
						OSTEOSCLEROSIS	++
			BRAIN				
				SOFTENING	+	ASTROCYTOMA	

1) FATE : W / KILLED IN EXTREMIS

2) GRADE : NEGATIVE NOT PRESENTED

3) GRADE OF MASS :

4) DAYS : AFTER START OF TREATMENT

A / SMALL AND/OR SINGULAR
B / MEDIAL AND/OR SPORADIC
C / LARGE AND/OR MULTIPLE

APPENDIX 11-F2-1128
CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 10 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1128	Y	742	KIDNEYS			PIGMENTATION (BILATERAL) INFILTRATION OF LEUCOCYTES (UNILATERAL) CALCIFICATION (BILATERAL) URINE CAST (UNILATERAL) CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL)	+ + + + +	

1) FATE : Y , KILLED ON SCHEDULE	2) GRADE : NEGATIVE NOT PRESENTED	3) GRADE OF MASS :
4) DAYS : AFTER START OF TREATMENT	+ , SLIGHT ++ , MODERATE +++ , SEVERE	A , SMALL AND/OR SINGULAR B , MEDIAL AND/OR SPORADIC C , LARGE AND/OR MULTIPLE

APPENDIX 11-F2-1129

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 10 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE DAYS	4) ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1129	W	659	HEART		FIBROSIS	+	ADENOMA: PITUITARY GLAND
			SPLEEN		EXTRAMEDULLARY HEMATOPOIESIS HEMOSIDEROSIS	++ ++	
			LUNG	+	HEMORRHAGE	+	CALCIFICATION OF VASCULAR WALL HEMORRHAGE
			LIVER			++	FATTY DEGENERATION OF HEPATIC CELLS SMALL GRANULOMA FOCAL NECROSIS
			KIDNEYS			+	CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) PIGMENTATION (BILATERAL) INFILTRATION OF LEUCOCYTES (BILATERAL)
			UTERUS			+	DILATATION OF DUCT
			PITUITARY GLAND	++ +++	ADENOMA	++ ++	
			BONE (FEMUR)			+++	OSTEOSCLEROSIS
			BRAIN	+	IMPRESSION	++ ++	ATROPHY HEMORRHAGE

1) FATE : W , KILLED IN EXTREMIS 2) GRADE : NEGATIVE NOT PRESENTED 3) GRADE OF MASS :
+ , SLIGHT A , SMALL AND/OR SINGULAR
++ , MODERATE B , MEDIAL AND/OR SPORADIC
+++ , SEVERE C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F2-1130

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 10 PPM FEMALE

STUDY NO. 83004

MONONUCLEAR CELL LEUKEMIA
: MULTIPLE ORGANS

1) FATE : X , FOUND DEAD

2) GRADE : NEGATIVE NOT PRESENTED

3) GRADE OF MASS : -----

GRADE OF MASS.

A / SMALL AND/OR SINGULAR
B / MEDIAL AND/OR SPORADIC
C / LARGE AND/OR MULTIPLE

(4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F2-1131

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 10 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1131	Y	742	LIVER	REDDISH PATCH	+			
			KIDNEYS					
						CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) PIGMENTATION (BILATERAL) INFILTRATION OF LEUCOCYTES (BILATERAL) CALCIFICATION (UNILATERAL)	+	
							++	
							+	
							+	

1) FATE : Y , KILLED ON SCHEDULE	2) GRADE : NEGATIVE NOT PRESENTED	3) GRADE OF MASS :
4) DAYS : AFTER START OF TREATMENT	+ , SLIGHT ++ , MODERATE +++ , SEVERE	A , SMALL AND/OR SINGULAR B , MEDIAL AND/OR SPORADIC C , LARGE AND/OR MULTIPLE

APPENDIX 11-F2-1132

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 10 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1132	Y	742	KIDNEYS			URINE CAST (BILATERAL) PIGMENTATION (BILATERAL) CALCIFICATION (BILATERAL) INFILTRATION OF LEUCOCYTES (BILATERAL)	+	
			ADRENAL GLANDS			INFILTRATION OF LEUCOCYTES (BILATERAL)	+	
			MAMMARY GLAND	MASS	C			

1) FATE : Y , KILLED ON SCHEDULE

2) GRADE : NEGATIVE NOT PRESENTED

3) GRADE OF MASS :

4) DAYS : AFTER START OF TREATMENT

A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE

APPENDIX 11-F2-1134
CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 10 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1134	W	680	MULTIPLE ORGANS			MONONUCLEAR CELL LEUKEMIA		MONONUCLEAR CELL LEUKEMIA : MULTIPLE ORGANS ADENOMA: PITUITARY GLAND GRANULAR MYOBLASTOMA : UTERUS
			LYMPH NODES (SUBMAXI.) SPLEEN	ENLARGEMENT WHITISH PATCH ENLARGEMENT	++ + +++			
			LUNG	REDDISH CHANGE	+	HEMORRHAGE	+	
			LIVER	ROUGHNESS OF SURFACE YELLOWISH CHANGE	+ +		+	
			PANCREAS			ATROPHY OF PANCREATIC ACINUS	+	
			KIDNEYS			CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) PIGMENTATION (BILATERAL) CALCIFICATION (BILATERAL) INFILTRATION OF LEUCOCYTES (UNILATERAL)	+ + ++ + +	
			UTERUS			GRANULAR MYOBLASTOMA		
			PITUITARY GLAND	ENLARGEMENT HEMORRHAGE	+++ ++	ADENOMA		
			ADRENAL GLANDS			HYPERPLASIA OF MEDULLARY CELLS (UNILATERAL)	+	
			MAMMARY GLAND			DILATATION OF GLAND	+	

1) FATE : W , KILLED IN EXTREMIS

2) GRADE : NEGATIVE NOT PRESENTED
+ , SLIGHT
++ , MODERATE
+++ , SEVERE

3) GRADE OF MASS :

A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F2-1134 CONTINUED
 CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
 OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 10 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1134	W	680	BRAIN	IMPRESSION REDDISH CHANGE	+	ATROPHY DILATATION OF CEREBRAL VENTRICLE	+	

1) FATE : W / KILLED IN EXTREMIS

2) GRADE : NEGATIVE NOT PRESENTED

3) GRADE OF MASS :

- A / SMALL AND/OR SINGULAR
- B / MEDIAL AND/OR SPORADIC
- C / LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

+

SLIGHT

MODERATE

SEVERE

APPENDIX 11-F2-1136

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 10 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1136	Y	742	KIDNEYS	ROUGHNESS OF SURFACE (BILATERAL)	+	CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) INFILTRATION OF LEUCOCYTES (BILATERAL) PIGMENTATION (BILATERAL)	+++ + ++	
			PITUITARY GLAND	HEMORRHAGE	+			
			ADRENAL GLANDS	ENLARGEMENT (UNILATERAL)	+++	PHEOCHROMOCYTOMA (BILATERAL)		

1) FATE : Y , KILLED ON SCHEDULE 2) GRADE : NEGATIVE NOT PRESENTED 3) GRADE OF MASS :
 + , SLIGHT A , SMALL AND/OR SINGULAR
 ++ , MODERATE B , MEDIAL AND/OR SPORADIC
 +++ , SEVERE C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F2-1137

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 10 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1137	W	713	MULTIPLE ORGANS			MONONUCLEAR CELL LEUKEMIA		MONONUCLEAR CELL LEUKEMIA : MULTIPLE ORGANS
			SPLEEN	ENLARGEMENT MASS	++ A			
			LARYNGOPHARYNX					
			LUNG	HEMORRHAGE	+++			
			LIVER	WHITISH PATCH	+			
			KIDNEYS					
						CYSTIC DILATATION OF GLAND	+	
						FOCAL NECROSIS	++	
						CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) PIGMENTATION (BILATERAL) CALCIFICATION (BILATERAL) INFILTRATION OF LEUCOCYTES (BILATERAL)	+	
			PITUITARY GLAND	HEMORRHAGE	+	HYPERPLASIA OF CHROMOPHOBE CELLS CONGESTION	+	
			MAMMARY GLAND			HYPERPLASIA	+	
			BRAIN	HEMORRHAGE	++	HEMORRHAGE	++	
			SPINAL CORD			HEMORRHAGE	+	

1) FATE : W , KILLED IN EXTREMIS

2) GRADE : NEGATIVE NOT PRESENTED

3) GRADE OF MASS :

A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F2-1138

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 10 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1138	Y	742	KIDNEYS			URINE CAST (BILATERAL) PIGMENTATION (BILATERAL) INFILTRATION OF LEUCOCYTES (BILATERAL) CALCIFICATION (UNILATERAL)	+ ++ + +	
			PITUITARY GLAND	REDDISH PATCH	+			
			ADRENAL GLANDS			VACUOLAR DEGENERATION OF CORTICAL CELLS (BILATERAL)	+	

1) FATE : Y , KILLED ON SCHEDULE	2) GRADE : NEGATIVE NOT PRESENTED + , SLIGHT ++ , MODERATE +++ , SEVERE	3) GRADE OF MASS : A , SMALL AND/OR SINGULAR B , MEDIAL AND/OR SPORADIC C , LARGE AND/OR MULTIPLE
4) DAYS : AFTER START OF TREATMENT		

APPENDIX 11-F2-1139

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 10 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1139	W	680	MULTIPLE ORGANS			MONONUCLEAR CELL LEUKEMIA		MONONUCLEAR CELL LEUKEMIA
			HEART			FIBROSIS	+	: MULTIPLE ORGANS
			SPLEEN	ENLARGEMENT	+++			
			NASAL CAVITY			INFILTRATION OF LEUCOCYTES	+	
			LUNG	REDDISH CHANGE	+			
			LIVER	ROUGHNESS OF SURFACE YELLOWISH CHANGE	+	PROLIFERATION OF BILE DUCT	+	
			KIDNEYS			PIGMENTATION (BILATERAL) URINE CAST (UNILATERAL) INFILTRATION OF LEUCOCYTES (BILATERAL)	+++ + +	
			PITUITARY GLAND	ENLARGEMENT	+	CONGESTION HYPERPLASIA OF CHROMOPHOBE CELLS	+ ++	
			THYROID GLANDS	DISCOLORATION (BILATERAL)	+			
			ADRENAL GLANDS			CONGESTION (BILATERAL)	+	

1) FATE : W / KILLED IN EXTREMIS

2) GRADE : NEGATIVE NOT PRESENTED

3) GRADE OF MASS :

A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F2-1140

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 10 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) W	721 DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1140	W			MULTIPLE ORGANS			MONONUCLEAR CELL LEUKEMIA		MONONUCLEAR CELL LEUKEMIA : MULTIPLE ORGANS PAPILLARY ADENOMA : THYROID GLANDS
				SPLEEN	ENLARGEMENT	+++			
				LIVER	ROUGHNESS OF SURFACE	+++			
				KIDNEYS	CYST (UNILATERAL)	++	CYST (UNILATERAL) PIGMENTATION (BILATERAL) URINE CAST (BILATERAL)	+++ +++ +	
				PITUITARY GLAND	ENLARGEMENT	+	CYST	+	
				THYROID GLANDS	ENLARGEMENT (UNILATERAL)	+++	PAPILLARY ADENOMA (UNILATERAL)		
				MAMMARY GLAND			HYPERPLASIA	+	

1) FATE : W , KILLED IN EXTREMIS

2) GRADE : NEGATIVE NOT PRESENTED
+ , SLIGHT
++ , MODERATE
+++ , SEVERE

3) GRADE OF MASS :

A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F2-1141
CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 10 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1141	W	666	MULTIPLE ORGANS			MONONUCLEAR CELL LEUKEMIA		MONONUCLEAR CELL LEUKEMIA : MULTIPLE ORGANS
			LYMPH NODES (MESENT.)	ENLARGEMENT	+			
			SPLEEN	ENLARGEMENT WHITISH PATCH	+++ +			
			LUNG	NODULE REDDISH CHANGE	+			
			LIVER	ROUGHNESS OF SURFACE ENLARGEMENT	+			
			PANCREAS			ATROPHY OF PANCREATIC ACINUS	++	
			KIDNEYS			PIGMENTATION (BILATERAL) CALCIFICATION (BILATERAL) REGENERATIVE RENAL TUBULE (UNILATERAL) INFILTRATION OF LEUCOCYTES (UNILATERAL)	+++ + + +	
			PITUITARY GLAND	ENLARGEMENT HEMORRHAGE	+	HEMORRHAGE MIGRATION OF HEMOSIDERIN-LADEN CELLS	++ +	
			THYROID GLANDS			HYPERPLASIA OF C-CELLS (UNILATERAL)	+	
			ADRENAL GLANDS	ENLARGEMENT (BILATERAL)	+			

1) FATE : W , KILLED IN EXTREMIS
2) GRADE : NEGATIVE NOT PRESENTED
+ , SLIGHT
++ , MODERATE
+++ , SEVERE
3) GRADE OF MASS :
A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE
4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F2-1141 CONTINUED
CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 10 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1141	W	666	MAMMARY GLAND			DILATATION OF GLAND	+	

1) FATE : W , KILLED IN EXTREMIS
2) GRADE : NEGATIVE NOT PRESENTED
+ , SLIGHT
++ , MODERATE
+++ , SEVERE
3) GRADE OF MASS :
A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE
4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F2-1142

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 10 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1142	Y	742	KIDNEYS			PIGMENTATION (BILATERAL) CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) CALCIFICATION (BILATERAL) INFILTRATION OF LEUCOCYTES (UNILATERAL)	++ + + +	
			UTERUS	MASS	A			
			ADRENAL GLANDS			VACUOLAR DEGENERATION OF CORTICAL CELLS (UNILATERAL)	+	

1) FATE : Y , KILLED ON SCHEDULE				2) GRADE : NEGATIVE NOT PRESENTED + , SLIGHT ++ , MODERATE +++ , SEVERE		3) GRADE OF MASS : A , SMALL AND/OR SINGULAR B , MEDIAL AND/OR SPORADIC C , LARGE AND/OR MULTIPLE		
4) DAYS : AFTER START OF TREATMENT								

APPENDIX 11-F2-1143

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 10 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1143	Y	743	KIDNEYS			CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) PIGMENTATION (BILATERAL) INFILTRATION OF LEUCOCYTES (BILATERAL) CALCIFICATION (UNILATERAL)	++ ++ + +	
			PITUITARY GLAND	ENLARGEMENT HEMORRHAGE	++ +			
			ADRENAL GLANDS			VACUOLAR DEGENERATION OF CORTICAL CELLS (UNILATERAL) INFILTRATION OF LEUCOCYTES (UNILATERAL)	+ +	

1) FATE : Y , KILLED ON SCHEDULE

4) DAYS : AFTER START OF TREATMENT

2) GRADE : NEGATIVE NOT PRESENTED
+ , SLIGHT
++ , MODERATE
+++ , SEVERE

3) GRADE OF MASS :
A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE

APPENDIX 11-F2-1144

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 10 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1144	Y	743	KIDNEYS			CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) PIGMENTATION (BILATERAL) CALCIFICATION (UNILATERAL) INFILTRATION OF LEUCOCYTES (UNILATERAL)	++ + + +	
			PITUITARY GLAND	HEMORRHAGE	+			

1) FATE : Y , KILLED ON SCHEDULE 2) GRADE : NEGATIVE NOT PRESENTED 3) GRADE OF MASS :
 + , SLIGHT A , SMALL AND/OR SINGULAR
 ++ , MODERATE B , MEDIAL AND/OR SPORADIC
 +++ , SEVERE C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F2-1146

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 10 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1146	Y	743	KIDNEYS			CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) PIGMENTATION (BILATERAL) INFILTRATION OF LEUCOCYTES (BILATERAL) CALCIFICATION (BILATERAL)	+	
			ADRENAL GLANDS			ANGIECTASIA (UNILATERAL) PHEOCHROMOCYTOMA (UNILATERAL)	++	
			MAMMARY GLAND	MASS	B			

1) FATE : Y , KILLED ON SCHEDULE	2) GRADE : NEGATIVE NOT PRESENTED + , SLIGHT ++ , MODERATE +++ , SEVERE	3) GRADE OF MASS : A , SMALL AND/OR SINGULAR B , MEDIAL AND/OR SPORADIC C , LARGE AND/OR MULTIPLE
4) DAYS : AFTER START OF TREATMENT		

APPENDIX 11-F2-1147
CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 10 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1147	W	629	MULTIPLE ORGANS			MONONUCLEAR CELL LEUKEMIA		MONONUCLEAR CELL LEUKEMIA : MULTIPLE ORGANS
			HEART	WHITISH PATCH	+			
			LYMPH NODES (SUBMAXI.)	ENLARGEMENT	+			
			LYMPH NODES (PULM.-HILUS)	ENLARGEMENT	+			
			LYMPH NODES (MESENT.)	ENLARGEMENT	+			
			SPLEEN	ENLARGEMENT	++			
			LIVER	ROUGHNESS OF SURFACE YELLOWISH CHANGE	+++ +++			
			KIDNEYS			URINE CAST (BILATERAL) PIGMENTATION (BILATERAL) CALCIFICATION (UNILATERAL)	+ ++ +	
			MAMMARY GLAND			HYPERPLASIA	+	

1) FATE : W , KILLED IN EXTREMIS 2) GRADE : NEGATIVE NOT PRESENTED 3) GRADE OF MASS :
+ , SLIGHT A , SMALL AND/OR SINGULAR
++ , MODERATE B , MEDIAL AND/OR SPORADIC
+++ , SEVERE C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F2-1148
CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 10 PPM FEMALE

STUDY NO: 83004

PROBABLE CAUSE
OF DEATH OR MAJOR
PATHOLOGICAL FINDINGS

2)
GRADE

HISTOPATHOLOGICAL
FINDINGS

2)3)
GRADE

GROSS PATHOLOGICAL
FINDINGS

ORGAN

4)
DAYS

ANIMAL
NUMBER

1148

Y

SPLEEN

743

ENLARGEMENT
NODULE

+

+

KIDNEYS

CHRONIC PROGRESSIVE
GLOMERULONEPHROPATHY (BILATERAL)
PIGMENTATION (BILATERAL)
CALCIFICATION (BILATERAL)
INFILTRATION OF LEUCOCYTES
(BILATERAL)

+

++

+

+

PITUITARY GLAND
ENLARGEMENT
HEMORRHAGE

+++

++

ADRENAL GLANDS

ANGIECTASIA (UNILATERAL)
EXTRAMEDULLARY HEMATOPOIESIS
(UNILATERAL)
VACUOLAR DEGENERATION OF CORTICAL
CELLS (UNILATERAL)

+++

+

+

SKIN

NODULE

++

1) FATE : Y , KILLED ON SCHEDULE

2) GRADE : NEGATIVE NOT PRESENTED

3) GRADE OF MASS :

A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

+, SLIGHT
++, MODERATE
+++, SEVERE

APPENDIX 11-F2-1149

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 10 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1149	Y	743	KIDNEYS			CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) PIGMENTATION (BILATERAL)	+	
			PITUITARY GLAND	HEMORRHAGE ENLARGEMENT	++ +++			
			BRAIN	IMPRESSION	++			

1) FATE : Y , KILLED ON SCHEDULE	2) GRADE : NEGATIVE NOT PRESENTED + , SLIGHT ++ , MODERATE +++ , SEVERE	3) GRADE OF MASS : A , SMALL AND/OR SINGULAR B , MEDIAL AND/OR SPORADIC C , LARGE AND/OR MULTIPLE
4) DAYS : AFTER START OF TREATMENT		

APPENDIX 11-F2-1150

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 10 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1150	W	631	SPLEEN			HEMOSIDEROSIS	+++	ADENOMA: PITUITARY GLAND
			NASAL CAVITY			INFILTRATION OF LEUCOCYTES	+	
			LIVER			FATTY DEGENERATION OF HEPATIC CELLS SMALL GRANULOMA	++ +	
			KIDNEYS			CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) CALCIFICATION (BILATERAL) PIGMENTATION (BILATERAL) INFILTRATION OF LEUCOCYTES (UNILATERAL)	++ + + +	
			PITUITARY GLAND	MASS REDDISH CHANGE	A +++	ADENOMA		

1) FATE : W , KILLED IN EXTREMIS

4) DAYS : AFTER START OF TREATMENT

2) GRADE : NEGATIVE NOT PRESENTED

+ , SLIGHT
++ , MODERATE
+++ , SEVERE

3) GRADE OF MASS :

A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE

APPENDIX 11-F2-1151

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 10 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1151	Y	743	KIDNEYS			CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) PIGMENTATION (BILATERAL) CALCIFICATION (BILATERAL)	+	
			PITUITARY GLAND	ENLARGEMENT HEMORRHAGE	++ +			

1) FATE : Y / KILLED ON SCHEDULE . 2) GRADE : NEGATIVE NOT PRESENTED 3) GRADE OF MASS :
+ / SLIGHT A / SMALL AND/OR SINGULAR
++ / MODERATE B / MEDIAL AND/OR SPORADIC
+++ / SEVERE C / LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F2-1152

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 10 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1152	W	729	SPLEEN			HEMOSIDEROSIS	++	ADENOMA: PITUITARY GLAND
			LIVER			SMALL GRANULOMA FOCAL ATROPHY OF HEPATIC CELLS	++ +	CALCULOSIS: URINARY BLADDER
			KIDNEYS			URINE CAST (BILATERAL) PIGMENTATION (BILATERAL) GLOMERULOSCLEROSIS (UNILATERAL) INFILTRATION OF LEUCOCYTES (BILATERAL) REGENERATIVE RENAL TUBULE (BILATERAL) CALCIFICATION (UNILATERAL)	+ + + + + + +	
			URINARY BLADDER	MASS CALCULOSIS THICKENING	B +++ +++	CALCULOSIS	++	
			UTERUS			HEMORRHAGE	+	
			PITUITARY GLAND	HEMORRHAGE ENLARGEMENT	+ ++	ADENOMA		
			THYROID GLANDS			ENLARGEMENT OF FOLLICLE (UNILATERAL)	++	
			BRAIN	IMPRESSION	+	ATROPHY	+	

1) FATE : W , KILLED IN EXTREMIS

2) GRADE : NEGATIVE NOT PRESENTED

3) GRADE OF MASS :

A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F3-1201

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 100 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1201	Y	740	SPLEEN	ENLARGEMENT	+			
			KIDNEYS			URINE CAST (BILATERAL) PIGMENTATION (BILATERAL) REGENERATIVE RENAL TUBULE (UNILATERAL)	++ ++ +	
			CLITORAL GLAND	NODULE	+			

1) FATE : Y , KILLED ON SCHEDULE

2) GRADE : NEGATIVE NOT PRESENTED

3) GRADE OF MASS :

4) DAYS : AFTER START OF TREATMENT

A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE

+, SLIGHT
++, MODERATE
+++, SEVERE

APPENDIX 11-F3-1202

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 100 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1202	W	657	MULTIPLE ORGANS	YELLOWISH CHANGE	++	MONONUCLEAR CELL LEUKEMIA		MONONUCLEAR CELL LEUKEMIA : MULTIPLE ORGANS
			HEART			FIBROSIS	++	
			THYMUS			HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	+	
			SPLEEN	ENLARGEMENT	+			
			NASAL CAVITY			INFILTRATION OF LEUCOCYTES	++	
			LUNG	HEMORRHAGE	++	HEMORRHAGE CALCIFICATION OF VASCULAR WALL	+	
			LIVER	ENLARGEMENT YELLOWISH CHANGE	+	CHOLANGIOFIBROSIS	+	
			KIDNEYS			URINE CAST (BILATERAL) PIGMENTATION (BILATERAL) INFILTRATION OF LEUCOCYTES (BILATERAL) REGENERATIVE RENAL TUBULE (BILATERAL) THICKENING OF BASEMENT MAMBRANE (BILATERAL)	+	
			PITUITARY GLAND	NODULE	+	HEMORRHAGE	++	
				REDDISH CHANGE	+	MIGRATION OF HEMOSIDERIN-LADEN CELLS	+	
			BONE (FEMUR)			OSTEOSCLEROSIS	++	

1) FATE : W , KILLED IN EXTREMIS

2) GRADE : NEGATIVE NOT PRESENTED

3) GRADE OF MASS :

A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

+ , SLIGHT
++ , MODERATE
+++ , SEVERE

LEVEL AND SEX : 100 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1202	W	657	MAMMARY GLAND			HYPERPLASIA	+	
			EYE BALLS			CATARACT (UNILATERAL) RETINAL ATROPHY (UNILATERAL)	++ +++	
			BRAIN			PIGMENTATION	+	
			SPINAL CORD			PIGMENTATION	+	

11) FATE : W , KILLED IN EXTREMIS

22) GRADE : NEGATIVE NOT PRESENTED

3) GRADE OF MASS :

A / SMALL AND/OR SINGULAR
B / MEDIAL AND/OR SPORADIC
C / LARGE AND/OR MULTIPLE

44) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F3-1203
CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 100 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1203	Y	740	KIDNEYS			URINE CAST (BILATERAL) INFILTRATION OF LEUCOCYTES (BILATERAL) REGENERATIVE RENAL TUBULE (BILATERAL) THICKENING OF BASEMENT MAMBRANE (BILATERAL) PIGMENTATION (BILATERAL)	+	
			PITUITARY GLAND	ENLARGEMENT HEMORRHAGE	+		+	
			ADRENAL GLANDS		+	HYPERPLASIA OF MEDULLARY CELLS (UNILATERAL) HYPERPLASIA OF GLOMERULOSA CELLS (BILATERAL)	+	
			MAMMARY GLAND	MASS	B			

1) FATE : Y , KILLED ON SCHEDULE 2) GRADE : NEGATIVE NOT PRESENTED 3) GRADE OF MASS :
+ , SLIGHT A , SMALL AND/OR SINGULAR
++ , MODERATE B , MEDIAL AND/OR SPORADIC
+++ , SEVERE C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F3-1204
CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 100 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1204	X	630	HEART			FIBROSIS	+	ADENOMA: PITUITARY GLAND
			THYMUS			HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	+	
			SPLEEN			HEMOSIDEROSIS	+++	
			NASAL CAVITY			INFILTRATION OF LEUCOCYTES	++	
			LUNG	HEMORRHAGE CONGESTION	++ ++	CONGESTIVE EDEMA MIGRATION OF MACROPHAGE IN ALVEOLI INFILTRATION OF LEUCOCYTES CALCIFICATION OF VASCULAR WALL	++ + + +	
			LIVER	CONGESTION	+++	CONGESTION INFILTRATION OF LEUCOCYTES FATTY DEGENERATION OF HEPATIC CELLS SMALL GRANULOMA FOCAL ATROPHY OF HEPATIC CELLS	+ + + + +	
			KIDNEYS			CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) INFILTRATION OF LEUCOCYTES (BILATERAL) PIGMENTATION (BILATERAL)	+ + + +	
			UTERUS			INFILTRATION OF LEUCOCYTES PIGMENTATION	+ +	
			PITUITARY GLAND	ENLARGEMENT	+++	ADENOMA		

1) FATE : X , FOUND DEAD

2) GRADE : NEGATIVE NOT PRESENTED
+ , SLIGHT
++ , MODERATE
+++ , SEVERE

3) GRADE OF MASS :

A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F3-1204 CONTINUED
CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 100 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1204	X	630	PITUITARY GLAND	HEMORRHAGE	+++			
			MAMMARY GLAND			HYPERPLASIA	+	
			BRAIN	IMPRESSION	+	PIGMENTATION HEMORRHAGE	+	
			SPINAL CORD			PIGMENTATION	+	

1) FATE : X , FOUND DEAD
2) GRADE : NEGATIVE NOT PRESENTED
+ , SLIGHT
++ , MODERATE
+++ , SEVERE
3) GRADE OF MASS :
A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE
4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F3-1205

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 100 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1205	Y	740	KIDNEYS			CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) INFILTRATION OF LEUCOCYTES (BILATERAL) PIGMENTATION (BILATERAL) CALCIFICATION (BILATERAL)	+	
			PITUITARY GLAND	HEMORRHAGE	+			
			ADRENAL GLANDS			INFILTRATION OF LEUCOCYTES (UNILATERAL)	+	
			MAMMARY GLAND	NODULE	+			

1) FATE : Y / KILLED ON SCHEDULE

2) GRADE : NEGATIVE NOT PRESENTED

3) GRADE OF MASS :

4) DAYS : AFTER START OF TREATMENT

A / SMALL AND/OR SINGULAR
B / MEDIAL AND/OR SPORADIC
C / LARGE AND/OR MULTIPLE

APPENDIX 11-F3-1206

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 100 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1206	Y	740	LIVER	NODULE	+			
			KIDNEYS					
						PIGMENTATION (BILATERAL)	+	
						CALCIFICATION (BILATERAL)	+	
						CHRONIC PROGRESSIVE	+	
						GLOMERULONEPHROPATHY (BILATERAL)		
						INFILTRATION OF LEUCOCYTES (UNILATERAL)	+	

MAMMARY GLAND MASS

B

1) FATE : Y / KILLED ON SCHEDULE 2) GRADE : NEGATIVE NOT PRESENTED 3) GRADE OF MASS :

4) DAYS : AFTER START OF TREATMENT

++ , SLIGHT
+++ , MODERATE
+++ , SEVERE

A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE

APPENDIX 11-F3-1207
CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 100 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1207	W	666	MULTIPLE ORGANS			MONONUCLEAR CELL LEUKEMIA		MONONUCLEAR CELL LEUKEMIA
			HEART			INFILTRATION OF LEUCOCYTES	+	: MULTIPLE ORGANS C-CELL ADENOMA: THYROID GLANDS
			THYMUS			HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	+	
			LYMPH NODES (PULM.-HILUS)	ENLARGEMENT	+			
			LYMPH NODES (MESENT.)	ENLARGEMENT	+++			
			SPLEEN	ENLARGEMENT	++			
			BONE MARROW			ACTIVATION OF HEMATOPOIESIS	++	
			NASAL CAVITY			INFILTRATION OF LEUCOCYTES	++	
			ILEUM			SEROSITIS	+	
			LIVER	YELLOWISH CHANGE ROUGHNESS OF SURFACE	+ +	FOCAL NECROSIS FATTY DEGENERATION OF HEPATIC CELLS	+ +	
			KIDNEYS			PIGMENTATION (BILATERAL) CALCIFICATION (BILATERAL) INFILTRATION OF LEUCOCYTES (BILATERAL) URINE CAST (BILATERAL)	+ + + + +	
			UTERUS			PIGMENTATION	+	
			PITUITARY GLAND	ENLARGEMENT	+			

1) FATE : W , KILLED IN EXTREMIS 2) GRADE : NEGATIVE NOT PRESENTED 3) GRADE OF MASS :
+ , SLIGHT A , SMALL AND/OR SINGULAR
++ , MODERATE B , MEDIAL AND/OR SPORADIC
+++ , SEVERE C , LARGE AND/OR MULTIPLE

APPENDIX 11-F3-1207 CONTINUED

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 100 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1207	W	666	THYROID GLANDS			C-CELL ADENOMA (UNILATERAL)		
			MAMMARY GLAND			INFILTRATION OF LEUCOCYTES	+	
			BRAIN			PIGMENTATION	+	
			SPINAL CORD			PIGMENTATION	+	

1) FATE : W , KILLED IN EXTREMIS 2) GRADE : NEGATIVE NOT PRESENTED 3) GRADE OF MASS :
+ , SLIGHT A , SMALL AND/OR SINGULAR
++ , MODERATE B , MEDIAL AND/OR SPORADIC
+++ , SEVERE C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F3-1208

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 100 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1208	Y	740	LIVER	REDDISH CHANGE	+			
			KIDNEYS					
						CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL)	+	
						PIGMENTATION (BILATERAL)	+	
						INFILTRATION OF LEUCOCYTES (BILATERAL)	+	
						CALCIFICATION (UNILATERAL)	+	
			ADRENAL GLANDS			HYPERPLASIA OF GLOMERULOSA CELLS (UNILATERAL)	+	

1) FATE : Y / KILLED ON SCHEDULE	2) GRADE : NEGATIVE NOT PRESENTED	3) GRADE OF MASS :
	+	A , SMALL AND/OR SINGULAR
	++	B , MEDIAL AND/OR SPORADIC
4) DAYS : AFTER START OF TREATMENT	+++	C , LARGE AND/OR MULTIPLE

APPENDIX 11-F3-1209

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 100 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1209	W	658	MULTIPLE ORGANS			MONONUCLEAR CELL LEUKEMIA		MONONUCLEAR CELL LEUKEMIA
			HEART			FIBROSIS	+	: MULTIPLE ORGANS
			THYMUS			HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	+	ADENOMA: PITUITARY GLAND
			LYMPH NODES (PULM. HILUS)			BLOOD ABSORPTION	+	FIBROADENOMA: MAMMARY GLAND
			LYMPH NODES (PAN.-DUO.)	ENLARGEMENT REDDISH CHANGE	+			
			SPLEEN	ENLARGEMENT	+++			
			NASAL CAVITY			INFILTRATION OF LEUCOCYTES	+	
			LARYNGOPHARYNX			HYPERSECRETION	+	
			LUNG	DISCOLORATION HEMORRHAGE	+			
			LIVER	ENLARGEMENT ROUGHNESS OF SURFACE NODULE	++ + +++			
			KIDNEYS			CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) PIGMENTATION (BILATERAL)	+	
							++	

1) FATE : W , KILLED IN EXTREMIS

2) GRADE : NEGATIVE NOT PRESENTED

3) GRADE OF MASS :

A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

+ , SLIGHT
++ , MODERATE
+++ , SEVERE

APPENDIX 11-F3-1209 CONTINUED
CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 100 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1209	W	658	KIDNEYS					
			OVARIES			INFILTRATION OF LEUCOCYTES (BILATERAL)	+	
			UTERUS			CALCIFICATION (UNILATERAL)	+	
						FOLLICULAR CYST (UNILATERAL)	+	
						PIGMENTATION	+	
			PITUITARY GLAND	HEMORRHAGE ENLARGEMENT	+	ADENOMA		
					++			
			THYROID GLANDS			HYPERPLASIA OF C-CELLS (BILATERAL)	+	
			MAMMARY GLAND	MASS	C	FIBROADENOMA		
			BRAIN			PIGMENTATION	+	
			SPINAL CORD			PIGMENTATION	+	

1) FATE : W , KILLED IN EXTREMIS

2) GRADE : NEGATIVE NOT PRESENTED

3) GRADE OF MASS :

A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

+ , SLIGHT
++ , MODERATE
+++ , SEVERE

APPENDIX 11-F3-1210

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 100 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1210	Y	740	KIDNEYS			URINE CAST (BILATERAL) PIGMENTATION (BILATERAL) INFILTRATION OF LEUCOCYTES (BILATERAL) CALCIFICATION (BILATERAL)	+ + + +	

1) FATE : Y , KILLED ON SCHEDULE

4) DAYS : AFTER START OF TREATMENT

2) GRADE : NEGATIVE NOT PRESENTED
+ , SLIGHT
++ , MODERATE
+++ , SEVERE

3) GRADE OF MASS :
A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX :	100	PPM	FEMALE
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STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1211	Y	740	KIDNEYS			CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) PIGMENTATION (BILATERAL) INFILTRATION OF LEUCOCYTES (BILATERAL) CALCIFICATION (UNILATERAL)	+	
			PITUITARY GLAND	HEMORRHAGE	+			
			ADRENAL GLANDS			VACUOLAR DEGENERATION OF CORTICAL CELLS (BILATERAL) HYPERPLASIA OF MEDULLARY CELLS (UNILATERAL)	+	
			MAMMARY GLAND	MASS				

1) FATE : Y , KILLED ON SCHEDULE	2) GRADE : NEGATIVE NOT PRESENTED	3) GRADE OF MASS :
	+ , SLIGHT	A , SMALL AND/OR SINGULAR
	++ , MODERATE	B , MEDIAL AND/OR SPORADIC
	+++ , SEVERE	C , LARGE AND/OR MULTIPLE

APPENDIX 11-F3-1212
CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 100 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1212	W	617	HEART			FIBROSIS	+	PAPILLARY ADENOMA : MAMMARY GLAND
			LYMPH NODES (SUBMAXI.) SPLEEN			INCREASE OF PLASMA CELLS	+	MESENCHYMOMA: KIDNEYS
			NASAL CAVITY			HEMOSIDEROSIS	++	ADENOMA: PITUITARY GLAND
			PAROTID GLANDS			INFILTRATION OF LEUCOCYTES	++	ISLET-CELL ADENOMA : PANCREAS
			LIVER			INFILTRATION OF LEUCOCYTES (UNILATERAL)	+	
						FATTY DEGENERATION OF HEPATIC CELLS SMALL GRANULOMA INFILTRATION OF LEUCOCYTES	+	
			PANCREAS		+	ISLET-CELL ADENOMA	+	
			KIDNEYS		+	CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) PIGMENTATION (BILATERAL) CALCIFICATION (BILATERAL) INFILTRATION OF LEUCOCYTES (UNILATERAL) MESENCHYMOMA (UNILATERAL)	+	
			UTERUS			PIGMENTATION	+	
			VAGINA		+	DILATATION OF DUCT	++	

1) FATE : W , KILLED IN EXTREMIS

2) GRADE : NEGATIVE NOT PRESENTED

+ , SLIGHT
++ , MODERATE
+++ , SEVERE

3) GRADE OF MASS :

A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F3-1212 CONTINUED

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 100 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1212	W	617	VAGINA			INFILTRATION OF LEUCOCYTES	+	
			PITUITARY GLAND	MASS REDDISH CHANGE	A +	ADENOMA		
			MAMMARY GLAND	MASS	A	PAPILLARY ADENOMA		
			BRAIN			PIGMENTATION DILATATION OF CEREBRAL VENTRICLE	+ ++	

1) FATE : W , KILLED IN EXTREMIS

2) GRADE : NEGATIVE NOT PRESENTED
+ , SLIGHT
++ , MODERATE
+++ , SEVERE

3) GRADE OF MASS :
A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F3-1213

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 100 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
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1213	Y	740	KIDNEYS	ROUGHNESS OF SURFACE (BILATERAL)	+	CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) PIGMENTATION (BILATERAL) CALCIFICATION (BILATERAL) INFILTRATION OF LEUCOCYTES (BILATERAL)	++ ++ + +	
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THYROID GLANDS	ENLARGEMENT (UNILATERAL)	+
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ADRENAL GLANDS	HYPERPLASIA OF MEDULLARY CELLS (UNILATERAL)	+
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1) FATE : Y , KILLED ON SCHEDULE	2) GRADE : NEGATIVE NOT PRESENTED + , SLIGHT ++ , MODERATE +++ , SEVERE	3) GRADE OF MASS : A , SMALL AND/OR SINGULAR B , MEDIAL AND/OR SPORADIC C , LARGE AND/OR MULTIPLE
4) DAYS : AFTER START OF TREATMENT		

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 100 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1214	Y	740	KIDNEYS			CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) PIGMENTATION (BILATERAL) CALCIFICATION (BILATERAL) INFILTRATION OF LEUCOCYTES (BILATERAL)	+	
			CLITORAL GLAND	MASS	C			
			PITUITARY GLAND	HEMORRHAGE	+			
			ADRENAL GLANDS			VACUOLAR DEGENERATION OF CORTICAL CELLS (UNILATERAL)	+	
			MAMMARY GLAND	MASS	C			

1) FATE : Y , KILLED ON SCHEDULE	2) GRADE : NEGATIVE NOT PRESENTED + , SLIGHT ++ , MODERATE +++ , SEVERE	3) GRADE OF MASS : A , SMALL AND/OR SINGULAR B , MEDIAL AND/OR SPORADIC C , LARGE AND/OR MULTIPLE
4) DAYS : AFTER START OF TREATMENT		

APPENDIX 11-F3-1215
CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 100 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1215	W	427	HEART			FIBROSIS	+	ADENOCARCINOMA: PITUITARY GLAND
			SPLEEN			HEMOSIDEROSIS	+++	
			NASAL CAVITY			INFILTRATION OF LEUCOCYTES	++	
			LARYNGOPHARYNX			INFILTRATION OF LEUCOCYTES	+	
			LUNG			HISTIOCYTOSIS	+	
			LIVER			FATTY DEGENERATION OF HEPATIC CELLS SMALL GRANULOMA	++ ++	
			KIDNEYS			CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) PIGMENTATION (BILATERAL) CALCIFICATION (BILATERAL)	++ +++ +	
			UTERUS			PIGMENTATION	+	
			PITUITARY GLAND	MASS HEMORRHAGE	A +++	ADENOCARCINOMA		
			ADRENAL GLANDS			PIGMENTATION (BILATERAL)	++	
			BRAIN	IMPRESSION	+			
			SPINAL CORD			HEMORRHAGE	+	

1) FATE : W , KILLED IN EXTREMIS

2) GRADE : NEGATIVE NOT PRESENTED

3) GRADE OF MASS :

A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F3-1216

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 100 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1216	Y	741	KIDNEYS			CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) PIGMENTATION (BILATERAL) CALCIFICATION (BILATERAL) INFILTRATION OF LEUCOCYTES (UNILATERAL)	+	
			PITUITARY GLAND	HEMORRHAGE	+			
			MAMMARY GLAND	MASS	A			

1) FATE : Y , KILLED ON SCHEDULE

4) DAYS : AFTER START OF TREATMENT

2) GRADE : NEGATIVE NOT PRESENTED

+ , SLIGHT
++ , MODERATE
+++ , SEVERE

3) GRADE OF MASS :

A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE

APPENDIX 11-F3-1217

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 100 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1217	Y	741	SPLEEN	ENLARGEMENT	++			
			LIVER	ROUGHNESS OF SURFACE	+			
			KIDNEYS			CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) PIGMENTATION (BILATERAL) CALCIFICATION (BILATERAL) INFILTRATION OF LEUCOCYTES (BILATERAL)	+	
			PITUITARY GLAND	ENLARGEMENT REDDISH CHANGE	+			
			ADRENAL GLANDS		+	ANGIECTASIA (BILATERAL) VACUOLAR DEGENERATION OF CORTICAL CELLS (BILATERAL)	+	

1) FATE : Y , KILLED ON SCHEDULE

2) GRADE : NEGATIVE NOT PRESENTED

3) GRADE OF MASS :

A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

+, SLIGHT
++, MODERATE
+++, SEVERE

APPENDIX 11-F3-1218
CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 100 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1218	W	728	HEART			FIBROSIS	+	C-CELL CARCINOMA: THYROID GLANDS
			THYMUS			HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	+	ADENOMA: PITUITARY GLAND
			LYMPH NODES (PULM.HILUS) SPLEEN			BLOOD ABSORPTION	+	FIBROADENOMA: MAMMARY GLAND
			BONE MARROW			HEMOSIDEROSIS	++	
			NASAL CAVITY			PROLIFERATION OF RETICULAR CELLS	+	
			LUNG			INFILTRATION OF LEUCOCYTES	++	
			LIVER	DISCOLORATION	+	SMALL GRANULOMA FOCAL ATROPHY OF HEPATIC CELLS INFILTRATION OF LEUCOCYTES	+	
			KIDNEYS			HISTIOCYTOSIS	+	
						URINE CAST (BILATERAL) PIGMENTATION (BILATERAL) INFILTRATION OF LEUCOCYTES (UNILATERAL) CALCIFICATION (UNILATERAL) GLOMERULOSCLEROSIS (UNILATERAL) REGENERATIVE RENAL TUBULE (BILATERAL)	+	
			OVARIES			FOLLICULAR CYST (UNILATERAL)	+	

1) FATE : W , KILLED IN EXTREMIS

2) GRADE : NEGATIVE NOT PRESENTED

3) GRADE OF MASS :

A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

+ , SLIGHT
++ , MODERATE
+++ , SEVERE

APPENDIX 11-F3-1218 CONTINUED
CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 100 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1218	W	728	UTERUS			DILATATION OF DUCT PIGMENTATION	+	+
			PITUITARY GLAND	ENLARGEMENT HEMORRHAGE	+++ +++	ADENOMA		
			THYROID GLANDS			C-CELL CARCINOMA (UNILATERAL) HYPERPLASIA OF C-CELLS (UNILATERAL)	+	
			ADRENAL GLANDS			VACUOLAR DEGENERATION OF CORTICAL CELLS (UNILATERAL)	+	
			MAMMARY GLAND	MASS	C	FIBROADENOMA		
			HARDERIAN GLANDS			INFILTRATION OF LEUCOCYTES (BILATERAL)	++	
			BRAIN			PIGMENTATION	+	
			SPINAL CORD			PIGMENTATION	+	

1) FATE : W , KILLED IN EXTREMIS

2) GRADE : NEGATIVE NOT PRESENTED
+ , SLIGHT
++ , MODERATE
+++ , SEVERE

3) GRADE OF MASS :
A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F3-1219

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 100 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1219	Y	741	KIDNEYS			CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) PIGMENTATION (BILATERAL) INFILTRATION OF LEUCOCYTES (UNILATERAL)	+	

1) FATE : Y , KILLED ON SCHEDULE	2) GRADE : NEGATIVE NOT PRESENTED	3) GRADE OF MASS :
4) DAYS : AFTER START OF TREATMENT	+ , SLIGHT ++ , MODERATE +++ , SEVERE	A , SMALL AND/OR SINGULAR B , MEDIAL AND/OR SPORADIC C , LARGE AND/OR MULTIPLE

APPENDIX 11-F3-1220
CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 100 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
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1220 Y 741 KIDNEYS

URINE CAST (BILATERAL)
PIGMENTATION (BILATERAL)
INFILTRATION OF LEUCOCYTES
(BILATERAL)
CALCIFICATION (BILATERAL)

+

PITUITARY GLAND HEMORRHAGE

+

ADRENAL GLANDS

HYPERPLASIA OF CORTIC CELLS
(UNILATERAL)

++

1) FATE : Y , KILLED ON SCHEDULE

2) GRADE : NEGATIVE NOT PRESENTED

+ , SLIGHT
++ , MODERATE
+++ , SEVERE

3) GRADE OF MASS :

A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F3-1221

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 100 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1221	W	560	MULTIPLE ORGANS	YELLOWISH CHANGE	+	MONONUCLEAR CELL LEUKEMIA		MONONUCLEAR CELL LEUKEMIA : MULTIPLE ORGANS
			HEART			FIBROSIS	+	
			THYMUS			ATROPHY	+	
			LYMPH NODES (MESENT.)	ENLARGEMENT	+			
			SPLEEN	ENLARGEMENT MASS	++ B			
			NASAL CAVITY					
			LUNG	HEMORRHAGE	+			
			COLON	ENLARGEMENT OF PEYER'S PATCH	+++			
			PAROTID GLANDS					
			LIVER	DISCOLORATION ROUGHNESS OF SURFACE	+++ +			
			PANCREAS					
			KIDNEYS					
						VACUOLAR DEGENERATION (BILATERAL)	+	
						FATTY DEGENERATION OF HEPATIC CELLS	++	
						REGENERATIVE CHANGE	+	
						URINE CAST (BILATERAL) PIGMENTATION (BILATERAL)	+	

1) FATE : W / KILLED IN EXTREMIS

2) GRADE : NEGATIVE NOT PRESENTED

+ / SLIGHT
++ / MODERATE
+++ / SEVERE

3) GRADE OF MASS :

A / SMALL AND/OR SINGULAR
B / MEDIAL AND/OR SPORADIC
C / LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F3-1221 CONTINUED

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 100 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1221	W	560	KIDNEYS			INFILTRATION OF LEUCOCYTES (UNILATERAL) CALCIFICATION (BILATERAL) REGENERATIVE RENAL TUBULE (BILATERAL)	+	
			OVARIES			INCREASE OF CORPUS LUTEUM (BILATERAL)	++	
			UTERUS			PIGMENTATION	+	
			PITUITARY GLAND			MIGRATION OF HEMOSIDERIN-LADEN CELLS HYPERPLASIA OF CHROMOPHOBIC CELLS	+	
			ADRENAL GLANDS			VACUOLAR DEGENERATION OF CORTICAL CELLS (BILATERAL)	++	
			MAMMARY GLAND	ENLARGEMENT	+			
			HARDERIAN GLANDS	BLACKISH CHANGE (BILATERAL)	+	HYPERSECRETION (BILATERAL)	+	
			BRAIN			PIGMENTATION	+	
			SPINAL CORD			PIGMENTATION	+	

1) FATE : W , KILLED IN EXTREMIS

2) GRADE : NEGATIVE NOT PRESENTED
+ , SLIGHT
++ , MODERATE
+++ , SEVERE

3) GRADE OF MASS :
A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F3-1222

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 100 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1222	Y	741	SPLEEN	ENLARGEMENT	++			
			LIVER	ENLARGEMENT	+++			
			PANCREAS	MASS	B			
			KIDNEYS					CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) + PIGMENTATION (BILATERAL) + INFILTRATION OF LEUCOCYTES + (BILATERAL) + CALCIFICATION (UNILATERAL) + VACUOLAR DEGENERATION OF CORTICAL CELLS (BILATERAL) + INFILTRATION OF LEUCOCYTES + (UNILATERAL)
			ADRENAL GLANDS					

1) FATE : Y , KILLED ON SCHEDULE
2) GRADE : NEGATIVE NOT PRESENTED
3) GRADE OF MASS :
A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT
+ , SLIGHT
++ , MODERATE
+++ , SEVERE

APPENDIX 11-F3-1223
CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 100 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1223	W	720	MULTIPLE ORGANS			MONONUCLEAR CELL LEUKEMIA		MONONUCLEAR CELL LEUKEMIA
			THYMUS			HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	+	: MULTIPLE ORGANS POLYP: UTERUS C-CELL ADENOMA: THYROID GLANDS
			LYMPH NODES (PULM.HILUS) SPLEEN			BLOOD ABSORPTION	+	
			ENLARGEMENT		+++			
			BONE MARROW			ACTIVATION OF HEMATOPOIESIS	+	
			NASAL CAVITY			INFILTRATION OF LEUCOCYTES	+	
			LUNG			HISTIOCYTOSIS CALCIFICATION OF VASCULAR WALL	+	
			SUBLINGUAL GLANDS			INFILTRATION OF LEUCOCYTES (UNILATERAL)	+	
			LIVER		++	ROUGHNESS OF SURFACE DISCOLORATION	+	
					++	PROLIFERATION OF BILE DUCT WITH FIBROSIS HEMORRHAGE	+	
			KIDNEYS			URINE CAST (BILATERAL) PIGMENTATION (BILATERAL) CALCIFICATION (UNILATERAL) INFILTRATION OF LEUCOCYTES (UNILATERAL)	+	
			OVARIES			ATROPHY (BILATERAL)	+	

1) FATE : W , KILLED IN EXTREMIS

2) GRADE : NEGATIVE NOT PRESENTED

3) GRADE OF MASS :

A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

+ , SLIGHT
++ , MODERATE
+++ , SEVERE

APPENDIX 11-F3-1223 CONTINUED
CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 100 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1223	W	720	UTERUS	ENLARGEMENT	+	POLYP PIGMENTATION DILATATION OF DUCT INFILTRATION OF LEUCOCYTES	+ ++ +	
			PITUITARY GLAND			HEMORRHAGE	+	
			THYROID GLANDS	ENLARGEMENT (UNILATERAL)	+	C-CELL ADENOMA (UNILATERAL) HYPERPLASIA OF C-CELLS (UNILATERAL)	+	
			ADRENAL GLANDS			VACUOLAR DEGENERATION OF CORTICAL CELLS (UNILATERAL)	+	
			MAMMARY GLAND			INFILTRATION OF LEUCOCYTES	+	
			BRAIN			PIGMENTATION	+	
			SPINAL CORD			PIGMENTATION	+	

1) FATE : W , KILLED IN EXTREMIS
2) GRADE : NEGATIVE NOT PRESENTED
3) GRADE OF MASS :
A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE
4) DAYS : AFTER START OF TREATMENT
+ , SLIGHT
++ , MODERATE
+++ , SEVERE

APPENDIX 11-F3-1224
CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 100 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1224	X	714	MULTIPLE ORGANS			MONONUCLEAR CELL LEUKEMIA		MONONUCLEAR CELL LEUKEMIA : MULTIPLE ORGANS POLYP: UTERUS
			THORACIC CAVITY	HEMORRHAGE	++			
			ABDOMINAL CAVITY	HEMORRHAGE	++			
			HEART			FIBROSIS	+	
			THYMUS			HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	+	
			SPLEEN	ENLARGEMENT	+++			
			BONE MARROW			ACTIVATION OF HEMATOPOIESIS	+	
			NASAL CAVITY			INFLAMMATION	+	
			LUNG	CONGESTION	++	HISTIOCYTOSIS	+	
			LIVER	DISCOLORATION	+	CHOLANGIOFIBROSIS FATTY DEGENERATION OF HEPATIC CELLS	+	
			PANCREAS			REGENERATIVE CHANGE	+	
			KIDNEYS			CALCIFICATION (BILATERAL) CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (UNILATERAL) PIGMENTATION (BILATERAL)	+	

1) FATE : X / FOUND DEAD

2) GRADE : NEGATIVE NOT PRESENTED

+ / SLIGHT
++ / MODERATE
+++ / SEVERE

3) GRADE OF MASS :

A / SMALL AND/OR SINGULAR
B / MEDIAL AND/OR SPORADIC
C / LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F3-1224 CONTINUED
CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 100 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1224	X	714	KIDNEYS			INFILTRATION OF LEUCOCYTES (UNILATERAL)	+	
			OVARIES			INCREASE OF CORPUS LUTEUM (UNILATERAL)	+	
			UTERUS	ENLARGEMENT	+	POLYP PIGMENTATION	+	
			BRAIN			PIGMENTATION	+	
			SPINAL CORD			PIGMENTATION	+	
			OPTIC NERVE			INFILTRATION OF LEUCOCYTES (UNILATERAL)	+	

1) FATE : X , FOUND DEAD
2) GRADE : NEGATIVE NOT PRESENTED
+ , SLIGHT
++ , MODERATE
+++ , SEVERE
3) GRADE OF MASS :
A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE
4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F3-1225
CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 100 PPM FEMALE

STUDY NO. 83004							
ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE
PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS							
1225	W	718	MULTIPLE ORGANS	YELLOWISH CHANGE	+	MONONUCLEAR CELL LEUKEMIA	
			HEART			FIBROSIS	
			THYMUS			HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	+
			LYMPH NODES (PULM.-HILUS)	ENLARGEMENT	+	BLOOD ABSORPTION	+
			SPLEEN	ENLARGEMENT	+++		
			BONE MARROW			ACTIVATION OF HEMATOPOIESIS	+
			NASAL CAVITY			INFILTRATION OF LEUCOCYTES	+
			LUNG	WHITISH PATCH	++		
			LIVER	ROUGHNESS OF SURFACE	+++	PROLIFERATION OF BILE DUCT HEMORRHAGE	++ +
			KIDNEYS			URINE CAST (BILATERAL) PIGMENTATION (BILATERAL) INFILTRATION OF LEUCOCYTES (UNILATERAL)	++ + + +
			OVARIES			ATROPHY (BILATERAL)	+
			UTERUS	MASS ENLARGEMENT	C +	PIGMENTATION	+
MONONUCLEAR CELL LEUKEMIA : MULTIPLE ORGANS ADENOMA: PITUITARY GLAND ENDOMETRIAL STROMAL SARCOMA: UTERUS							

MONONUCLEAR CELL LEUKEMIA
: MULTIPLE ORGANS
ADENOMA: PITUITARY GLAND
ENDOMETRIAL STROMAL
SARCOMA: UTERUS

1) FATE : W , KILLED IN EXTREMIS
4) DAYS : AFTER START OF TREATMENT

2) GRADE : NEGATIVE NOT PRESENTED
+ , SLIGHT
++ , MODERATE
+++ , SEVERE

3) GRADE OF MASS :
A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE

APPENDIX 11-F3-1225 CONTINUED
CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 100 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	2) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1225	W	718	UTERUS					
			VAGINA					
			PITUITARY GLAND	ENLARGEMENT	+			
			ADRENAL GLANDS					
			BRAIN					
						INFILTRATION OF LEUCOCYTES ENDOMETRIAL STROMAL SARCOMA	+	
						INFILTRATION OF LEUCOCYTES	+	
						ADENOMA CYST	+	
						VACUOLAR DEGENERATION OF CORTICAL CELLS (UNILATERAL) HYPERPLASIA OF MEDULLARY CELLS (UNILATERAL)	+	
						PIGMENTATION	+	

1) FATE : W , KILLED IN EXTREMIS

2) GRADE : NEGATIVE NOT PRESENTED

+ , SLIGHT
++ , MODERATE
+++ , SEVERE

3) GRADE OF MASS :
A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F3-1226 CONTINUED
CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 100 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	2) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1226	W	732	PITUITARY GLAND			CELLS HYPERPLASIA OF CHROMOPHOBE CELLS	++	
			ADRENAL GLANDS	ENLARGEMENT (UNILATERAL)	+	PHEOCHROMOCYTOMA (UNILATERAL) VACUOLAR DEGENERATION OF CORTICAL CELLS (BILATERAL)	++	
			MAMMARY GLAND	MASS	C	FIBROADENOMA		
			HARDERIAN GLANDS			INFILTRATION OF LEUCOCYTES (UNILATERAL)	+	
			BRAIN			PIGMENTATION	+	

1) FATE : W , KILLED IN EXTREMIS
2) GRADE : NEGATIVE NOT PRESENTED
3) GRADE OF MASS :
A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE
4) DAYS : AFTER START OF TREATMENT
+ , SLIGHT
++ , MODERATE
+++ , SEVERE

APPENDIX 11-F3-1227
CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 100 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1227	W	575	HEART			FIBROSIS	+	MEDULLOBLASTOMA: BRAIN
			SPLEEN			HEMOSIDEROSIS	+++	ADENOMA: PITUITARY GLAND
			NASAL CAVITY			INFILTRATION OF LEUCOCYTES	++	
			LUNG			CALCIFICATION OF VASCULAR WALL	+	
			LIVER	NODULE	+	FOCAL ATROPHY OF HEPATIC CELLS SMALL GRANULOMA HYPERPLASTIC NODULE	+	
			KIDNEYS			PIGMENTATION (BILATERAL) CALCIFICATION (BILATERAL) INFILTRATION OF LEUCOCYTES (UNILATERAL) CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL)	+++	
			PITUITARY GLAND	ENLARGEMENT HEMORRHAGE	+++ +++	ADENOMA	++	
			MAMMARY GLAND			DILATATION OF GLAND	++	
			BRAIN	IMPRESSION HEMORRHAGE EDEMA	+	MEDULLOBLASTOMA	++	

1) FATE : W , KILLED IN EXTREMIS

2) GRADE : NEGATIVE NOT PRESENTED

3) GRADE OF MASS :

A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

+ , SLIGHT
++ , MODERATE
+++ , SEVERE

APPENDIX 11-F3-1228
CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 100 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1228	Y	741	SPLEEN	ENLARGEMENT	+			
			KIDNEYS			URINE CAST (BILATERAL) PIGMENTATION (BILATERAL) CALCIFICATION (UNILATERAL)	+	
			MAMMARY GLAND	MASS	B		+	

1) FATE : Y , KILLED ON SCHEDULE 2) GRADE : NEGATIVE NOT PRESENTED 3) GRADE OF MASS :
+ , SLIGHT A , SMALL AND/OR SINGULAR
++ , MODERATE B , MEDIAL AND/OR SPORADIC
+++ , SEVERE C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F3-1229
CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 100 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1229	Y	741	LIVER	YELLOWISH CHANGE	+			
			KIDNEYS	ROUGHNESS OF SURFACE	+	CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) PIGMENTATION (BILATERAL) CALCIFICATION (BILATERAL) INFILTRATION OF LEUCOCYTES (BILATERAL)	++ + + +	
			OVARIES	CYST (UNILATERAL)	+			
			PITUITARY GLAND	ENLARGEMENT	+			
			ADRENAL GLANDS			PHEOCHROMOCYTOMA (UNILATERAL) VACUOLAR DEGENERATION OF CORTICAL CELLS (UNILATERAL) HYPERPLASIA OF GLOMERULOSA CELLS (UNILATERAL)	+ +	
			MAMMARY GLAND	MASS	C			

1) FATE : Y , KILLED ON SCHEDULE 2) GRADE : NEGATIVE NOT PRESENTED 3) GRADE OF MASS :
+ , SLIGHT A , SMALL AND/OR SINGULAR
++ , MODERATE B , MEDIAL AND/OR SPORADIC
+++ , SEVERE C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F3-1230
CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 100 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1230	W	607	ABDOMINAL CAVITY	HEMORRHAGE	+			
			PERITONEUM	MASS	C	MALIGNANT FIBROUS HISTIOCYTOMA, PRIMARY		MALIGNANT FIBROUS HISTIO- CYTOMA: PERITONEUM
			SPLEEN			ATROPHY HEMOSIDEROSIS	+++ +++	
			BONE MARROW			CONGESTION	++	
			LUNG			CALCIFICATION OF VASCULAR WALL	+	
			LIVER	MASS	A	MALIGNANT FIBROUS HISTIOCYTOMA, METASTASIS		
			KIDNEYS			PIGMENTATION (BILATERAL) GLOMERULOSCLEROSIS (UNILATERAL) REGENERATIVE RENAL TUBULE (BILATERAL) CALCIFICATION (UNILATERAL)	+ + + +	

1) FATE : W , KILLED IN EXTREMIS

2) GRADE : NEGATIVE NOT PRESENTED

+ , SLIGHT
++ , MODERATE
+++ , SEVERE

3) GRADE OF MASS :
A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F3-1231

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 100 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1231	Y	741	SPLEEN	ENLARGEMENT	+			
			KIDNEYS					
			OVARIES	CYST (UNILATERAL)	+++			CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL)
			PITUITARY GLAND	ENLARGEMENT	++			
				HEMORRHAGE	+			INFILTRATION OF LEUCOCYTES (BILATERAL)
			ADRENAL GLANDS					PIGMENTATION (BILATERAL)
			EYE BALLS	GRAYISH CHANGE (UNILATERAL)	++			HYPERPLASIA OF MEDULLARY CELLS (UNILATERAL)

1) FATE : Y / KILLED ON SCHEDULE

2) GRADE : NEGATIVE NOT PRESENTED

3) GRADE OF MASS :

A / SMALL AND/OR SINGULAR
B / MEDIAL AND/OR SPORADIC
C / LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

+ / SLIGHT
++ / MODERATE
+++ / SEVERE

APPENDIX 11-F3-1232

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 100 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1232	Y	741	KIDNEYS			CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) PIGMENTATION (BILATERAL) INFILTRATION OF LEUCOCYTES (BILATERAL)	+	
			PITUITARY GLAND	ENLARGEMENT HEMORRHAGE	+++ +++			

1) FATE : Y , KILLED ON SCHEDULE 2) GRADE : NEGATIVE NOT PRESENTED 3) GRADE OF MASS :
 + , SLIGHT A , SMALL AND/OR SINGULAR
 ++ , MODERATE B , MEDIAL AND/OR SPORADIC
 +++ , SEVERE C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F3-1233
CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 100 PPM FEMALE

STUDY NO. 83004								
ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1233	X	546	MULTIPLE ORGANS			MONONUCLEAR CELL LEUKEMIA		MONONUCLEAR CELL LEUKEMIA : MULTIPLE ORGANS
			SPLEEN	ENLARGEMENT	++			
			NASAL CAVITY					
			LIVER	DISCOLORATION	+	INFILTRATION OF LEUCOCYTES	+	
			KIDNEYS					
						URINE CAST (BILATERAL)	+	
						PIGMENTATION (BILATERAL)	+	
						CALCIFICATION (BILATERAL)	+	

1) FATE : X , FOUND DEAD

2) GRADE : NEGATIVE NOT PRESENTED

+ , SLIGHT
++ , MODERATE
+++ , SEVERE

4) DAYS : AFTER START OF TREATMENT

3) GRADE OF MASS :

A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE

APPENDIX 11-F3-1234
CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 100 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1234	Y	742	LUNG	NODULE	+			
			KIDNEYS			CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) PIGMENTATION (BILATERAL) CALCIFICATION (UNILATERAL) INFILTRATION OF LEUCOCYTES (BILATERAL)	+	
			PITUITARY GLAND	HEMORRHAGE	+			
			SKIN (SUBCUTIS)	MASS	B			
			MAMMARY GLAND	MASS	B			

1) FATE : Y , KILLED ON SCHEDULE
2) GRADE : NEGATIVE NOT PRESENTED
3) GRADE OF MASS :
A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT
+ , SLIGHT
++ , MODERATE
+++ , SEVERE

APPENDIX 11-F3-1235

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 100 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1235	W	665	HEART			THROMBOENDOCARDITIS	+	ADENOCARCINOMA: CLITORAL GLAND
			LYMPH NODES (PULM. HILUS)	ENLARGEMENT	+			
			SPLEEN	ENLARGEMENT	+++	EXTRAMEDULLARY HEMATOPOIESIS	+++	
			BONE MARROW			ACTIVATION OF HEMATOPOIESIS EDEMA	+++ +	
			NASAL CAVITY			INFILTRATION OF LEUCOCYTES	+	
			LUNG	DISCOLORATION	+++			
			LIVER	DISCOLORATION	+++	FOCAL ATROPHY OF HEPATIC CELLS	+	
			KIDNEYS	BLACKISH CHANGE (BILATERAL)	+	URINE CAST (BILATERAL) PIGMENTATION (BILATERAL) INFILTRATION OF LEUCOCYTES (BILATERAL) CALCIFICATION (UNILATERAL)	++ ++ +	
			CLITORAL GLAND	MASS	C	ADENOCARCINOMA	+	
			PITUITARY GLAND	ENLARGEMENT	+	CYST	+	
			ADRENAL GLANDS			VACUOLAR DEGENERATION OF CORTICAL CELLS (BILATERAL) HYPERPLASIA OF MEDULLARY CELLS (BILATERAL)	++ +	

1) FATE : W / KILLED IN EXTREMIS

2) GRADE : NEGATIVE NOT PRESENTED

3) GRADE OF MASS :

A / SMALL AND/OR SINGULAR
B / MEDIAL AND/OR SPORADIC
C / LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

+ / SLIGHT
++ / MODERATE
+++ / SEVERE

APPENDIX 11-F3-1236

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 100 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1236	W	727	HEART			FIBROSIS	+	PYOGENIC STOMATITIS : ORAL CAVITY
			SPLEEN			ATROPHY	++	
			NASAL CAVITY			INFILTRATION OF LEUCOCYTES	+	
			LUNG	HEMORRHAGE	+	HEMORRHAGE	+	
			ORAL CAVITY	MASS	A	PYOGENIC STOMATITIS	+++	
			LIVER	DISCOLORATION	+			
			KIDNEYS	ROUGHNESS OF SURFACE	++	CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) PIGMENTATION (BILATERAL) INFILTRATION OF LEUCOCYTES (BILATERAL) CALCIFICATION (BILATERAL)	+++ ++ + +	
			OVARIES			CYST (UNILATERAL)	+	

1) FATE : W , KILLED IN EXTREMIS

2) GRADE : NEGATIVE NOT PRESENTED

+ , SLIGHT
++ , MODERATE
+++ , SEVERE

3) GRADE OF MASS :

A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F3-1237

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 100 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1237	Y	742	KIDNEYS			CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) PIGMENTATION (BILATERAL) CALCIFICATION (UNILATERAL)	+	
			ADRENAL GLANDS			VACUOLAR DEGENERATION OF CORTICAL CELLS (UNILATERAL) ANGIECTASIA (UNILATERAL)	++	
							++	

1) FATE : Y , KILLED ON SCHEDULE

2) GRADE : NEGATIVE NOT PRESENTED

+ , SLIGHT
++ , MODERATE
+++ , SEVERE

4) DAYS : AFTER START OF TREATMENT

3) GRADE OF MASS :

A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE

APPENDIX 11-F3-1238

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 100 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1238	Y	742	LIVER	REDDISH CHANGE	++			
			KIDNEYS			URINE CAST (BILATERAL) PIGMENTATION (BILATERAL) INFILTRATION OF LEUCOCYTES (BILATERAL) REGENERATIVE RENAL TUBULE (UNILATERAL) CALCIFICATION (UNILATERAL)	+	+
			ADRENAL GLANDS			VACUOLAR DEGENERATION OF CORTICAL CELLS (BILATERAL)	+	+

1) FATE : Y , KILLED ON SCHEDULE
2) GRADE : NEGATIVE NOT PRESENTED
3) GRADE OF MASS :
A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE
4) DAYS : AFTER START OF TREATMENT
+ , SLIGHT
++ , MODERATE
+++ , SEVERE

APPENDIX 11-F3-1239

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 100 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1239	Y	742	KIDNEYS			CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) PIGMENTATION (BILATERAL) CALCIFICATION (UNILATERAL) INFILTRATION OF LEUCOCYTES (UNILATERAL)	+	
			PITUITARY GLAND	ENLARGEMENT HEMORRHAGE	++ +			
			ADRENAL GLANDS			VACUOLAR DEGENERATION OF CORTICAL CELLS (UNILATERAL) HYPERPLASIA OF MEDULLARY CELLS (UNILATERAL)	++ +	
			MAMMARY GLAND	MASS	B			
			EYE BALLS	GRAYISH CHANGE (UNILATERAL)	+			
			BRAIN	IMPRESSION	+			

1) FATE : Y , KILLED ON SCHEDULE

2) GRADE : NEGATIVE NOT PRESENTED

3) GRADE OF MASS :

A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

+ , SLIGHT
++ , MODERATE
+++ , SEVERE

APPENDIX 11-F3-1240

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 100 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1240	Y	742	LIVER	WHITISH PATCH	+			
			KIDNEYS					
						URINE CAST (BILATERAL)	+	
						PIGMENTATION (BILATERAL)	++	
						CALCIFICATION (BILATERAL)	+	
						INFILTRATION OF LEUCOCYTES (BILATERAL)	+	
						REGENERATIVE RENAL TUBULE (UNILATERAL)	+	
			ADRENAL GLANDS			VACUOLAR DEGENERATION OF CORTICAL CELLS (UNILATERAL)	+	

1) FATE : Y / KILLED ON SCHEDULE 2) GRADE : NEGATIVE NOT PRESENTED 3) GRADE OF MASS :

4) DAYS : AFTER START OF TREATMENT + / SLIGHT A / SMALL AND/OR SINGULAR
++ / MODERATE B / MEDIAL AND/OR SPORADIC
+++ / SEVERE C / LARGE AND/OR MULTIPLE

APPENDIX 11-F3-1241

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 100 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1241	X	729	MULTIPLE ORGANS			MONONUCLEAR CELL LEUKEMIA		LEIOMYOSARCOMA: UTERUS MONONUCLEAR CELL LEUKEMIA : MULTIPLE ORGANS
			LYMPH NODES (SUBMAXI.)	ENLARGEMENT	+			
			SPLEEN	ENLARGEMENT	+++			
			LIVER	NODULE YELLOWISH CHANGE	+		FATTY DEGENERATION OF HEPATIC CELLS	++
			KIDNEYS		+++			
			UTERUS	MASS	C		URINE CAST (BILATERAL) CALCIFICATION (BILATERAL) PIGMENTATION (BILATERAL)	+ + ++
			PITUITARY GLAND	ENLARGEMENT HEMORRHAGE	+++ +++		LEIOMYOSARCOMA	
			BRAIN	IMPRESSION	+			

1) FATE : X , FOUND DEAD 2) GRADE : NEGATIVE NOT PRESENTED 3) GRADE OF MASS :
+ , SLIGHT A , SMALL AND/OR SINGULAR
++ , MODERATE B , MEDIAL AND/OR SPORADIC
+++ , SEVERE C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F3-1242
CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 100 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
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1242 Y 742 KIDNEYS

CHRONIC PROGRESSIVE
GLOMERULONEPHROPATHY (BILATERAL)
PIGMENTATION (BILATERAL)
CALCIFICATION (BILATERAL)
INFILTRATION OF LEUCOCYTES
(BILATERAL)

+

+

+

+

PITUITARY GLAND HEMORRHAGE

+

ADRENAL GLANDS

VACUOLAR DEGENERATION OF CORTICAL
CELLS (UNILATERAL)

+

MAMMARY GLAND MASS

B

1) FATE : Y , KILLED ON SCHEDULE	2) GRADE : NEGATIVE NOT PRESENTED + , SLIGHT ++ , MODERATE +++ , SEVERE	3) GRADE OF MASS : A , SMALL AND/OR SINGULAR B , MEDIAL AND/OR SPORADIC C , LARGE AND/OR MULTIPLE
4) DAYS : AFTER START OF TREATMENT		

APPENDIX 11-F3-1243
CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 100 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE DAYS	4) ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
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1243	X	662	HEART		FIBROSIS	+	HEMANGIOMA: UTERUS
			LIVER		DISCOLORATION	+++	
			KIDNEYS		URINE CAST (BILATERAL) PIGMENTATION (BILATERAL) CALCIFICATION (UNILATERAL)	+	
			UTERUS		MASS		
					HEMANGIOMA		

1) FATE : X , FOUND DEAD	2) GRADE : NEGATIVE NOT PRESENTED + , SLIGHT ++ , MODERATE +++ , SEVERE	3) GRADE OF MASS : A , SMALL AND/OR SINGULAR B , MEDIAL AND/OR SPORADIC C , LARGE AND/OR MULTIPLE
4) DAYS : AFTER START OF TREATMENT		

APPENDIX 11-F3-1244

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 100 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1244	W	609	LYMPH NODES (SUBMAXI.)	ENLARGEMENT	+	INFLAMMATION	+	SQUAMOUS CELL CARCINOMA : SKIN
			SPLEEN	ENLARGEMENT	++	EXTRAMEDULLARY HEMATOPOIESIS	++	
			BONE MARROW			ACTIVATION OF HEMATOPOIESIS	++	
			LUNG			ADENOMATOSIS	+++	
			LIVER	ROUGHNESS OF SURFACE YELLOWISH CHANGE	+++ ++	FATTY DEGENERATION OF HEPATIC CELLS	+++	
			KIDNEYS			PIGMENTATION (BILATERAL) INFILTRATION OF LEUCOCYTES (BILATERAL) URINE CAST (BILATERAL) CALCIFICATION (BILATERAL)	+ + + +	
			PITUITARY GLAND	HEMORRHAGE	+	CYST	+++	
			THYROID GLANDS			HYPERPLASIA OF C-CELLS (BILATERAL)	+	
			SKIN	MASS	B	SQUAMOUS CELL CARCINOMA		

1) FATE : W , KILLED IN EXTREMIS

2) GRADE : NEGATIVE NOT PRESENTED

3) GRADE OF MASS :

A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F3-1245

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 100 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1245	Y	742	KIDNEYS			CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) PIGMENTATION (BILATERAL) CALCIFICATION (BILATERAL)	++ + +	

1) FATE : Y , KILLED ON SCHEDULE

2) GRADE : NEGATIVE NOT PRESENTED

3) GRADE OF MASS :

A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

+ , SLIGHT
++ , MODERATE
+++ , SEVERE

APPENDIX 11-F3-1246

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 100 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1246	Y	743	KIDNEYS			URINE CAST (BILATERAL) PIGMENTATION (BILATERAL) INFILTRATION OF LEUCOCYTES (BILATERAL) REGENERATIVE RENAL TUBULE (BILATERAL) CALCIFICATION (UNILATERAL)	+	
			CLITORAL GLAND	MASS	A			
			ADRENAL GLANDS			VACUOLAR DEGENERATION OF CORTICAL CELLS (UNILATERAL)	+	

1) FATE : Y , KILLED ON SCHEDULE 2) GRADE : NEGATIVE NOT PRESENTED 3) GRADE OF MASS :
 + , SLIGHT
 ++ , MODERATE
 +++ , SEVERE
 A , SMALL AND/OR SINGULAR
 B , MEDIAL AND/OR SPORADIC
 C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F3-1247

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 100 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1247	Y	743	SPLEEN	ENLARGEMENT	++			
			LIVER	NODULE	+			
			KIDNEYS			CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) PIGMENTATION (BILATERAL) INFILTRATION OF LEUCOCYTES (BILATERAL) CALCIFICATION (BILATERAL)	+	
			PITUITARY GLAND	ENLARGEMENT	+			
			ADRENAL GLANDS			ANGIECTASIA (UNILATERAL)	++	

1) FATE : Y , KILLED ON SCHEDULE 2) GRADE : NEGATIVE NOT PRESENTED 3) GRADE OF MASS :

4) DAYS : AFTER START OF TREATMENT + , SLIGHT A , SMALL AND/OR SINGULAR

 ++ , MODERATE B , MEDIAL AND/OR SPORADIC

 +++ , SEVERE C , LARGE AND/OR MULTIPLE

APPENDIX 11-F3-1248

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 100 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1248	Y	743	KIDNEYS			CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) PIGMENTATION (BILATERAL) INFILTRATION OF LEUCOCYTES (BILATERAL) CALCIFICATION (BILATERAL)	+	

1) FATE : Y , KILLED ON SCHEDULE
2) GRADE : NEGATIVE NOT PRESENTED
3) GRADE OF MASS :
A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE
4) DAYS : AFTER START OF TREATMENT
+ , SLIGHT
++ , MODERATE
+++ , SEVERE

APPENDIX 11-F3-1249

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 100 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1249	X	742	MULTIPLE ORGANS			MYELOCYTIC LEUKEMIA		MYELOCYTIC LEUKEMIA : MULTIPLE ORGANS
			HEART			FIBROSIS	+	
			SPLEEN	ENLARGEMENT	+++			
			LUNG	HEMORRHAGE	++			
			LIVER	ENLARGEMENT NODULE	+++ +			
			KIDNEYS			PROLIFERATION OF BILE DUCT	+	
						CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) PIGMENTATION (BILATERAL) CALCIFICATION (BILATERAL)	+	
			PITUITARY GLAND	ENLARGEMENT HEMORRHAGE	+ +	HEMORRHAGE	++	
			ADRENAL GLANDS	ENLARGEMENT (BILATERAL)	+	CONGESTION (BILATERAL)	++	
			MAMMARY GLAND			HYPERPLASIA	+	
			BRAIN			HEMORRHAGE	+	

1) FATE : X , FOUND DEAD

2) GRADE : NEGATIVE NOT PRESENTED
+ , SLIGHT
++ , MODERATE
+++ , SEVERE

3) GRADE OF MASS :

A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F3-1250
CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 100 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1250	Y	743	LIVER	NODULE	+			
			KIDNEYS					
						CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL)	++	
						PIGMENTATION (BILATERAL)	+	
						CALCIFICATION (BILATERAL)	+	
						INFILTRATION OF LEUCOCYTES (BILATERAL)	+	
			PITUITARY GLAND	HEMORRHAGE	+			
			THYROID GLANDS	ENLARGEMENT (UNILATERAL)	+			
			ADRENAL GLANDS			VACUOLAR DEGENERATION OF CORTICAL CELLS (UNILATERAL)	+	

1) FATE : Y / KILLED ON SCHEDULE
2) GRADE : NEGATIVE NOT PRESENTED
+ / SLIGHT
++ / MODERATE
+++ / SEVERE
3) GRADE OF MASS :
A / SMALL AND/OR SINGULAR
B / MEDIAL AND/OR SPORADIC
C / LARGE AND/OR MULTIPLE
4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F3-1251

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 100 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1251	Y	743	LIVER KIDNEYS	NODULE +				
						URINE CAST (BILATERAL) PIGMENTATION (BILATERAL) CALCIFICATION (BILATERAL) INFILTRATION OF LEUCOCYTES (BILATERAL)	+ ++ + +	

1) FATE : Y , KILLED ON SCHEDULE	2) GRADE : NEGATIVE NOT PRESENTED + , SLIGHT ++ , MODERATE +++ , SEVERE	3) GRADE OF MASS : A , SMALL AND/OR SINGULAR B , MEDIAL AND/OR SPORADIC C , LARGE AND/OR MULTIPLE
4) DAYS : AFTER START OF TREATMENT		

APPENDIX 11-F3-1252

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 100 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1252	Y	743	KIDNEYS			CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) PIGMENTATION (BILATERAL) INFILTRATION OF LEUCOCYTES (BILATERAL) CALCIFICATION (UNILATERAL)	+	
			PITUITARY GLAND	HEMORRHAGE	+			
			SKIN (SUBCUTIS)	NODULE	+			
			EYE BALLS	GRAYISH CHANGE (UNILATERAL)	+			

1) FATE : Y / KILLED ON SCHEDULE 2) GRADE : NEGATIVE NOT PRESENTED
+ / SLIGHT
++ / MODERATE
+++ / SEVERE

3) GRADE OF MASS :
A / SMALL AND/OR SINGULAR
B / MEDIAL AND/OR SPORADIC
C / LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F4-1301
CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 1000 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1301	Y	740	HEART			FIBROSIS	+	NO SIGNIFICANT LESION
			THYMUS			HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	+	
			LYMPH NODES (SUBMAXI.)			BLOOD ABSORPTION	+	
			LYMPH NODES (PULM. HILUS)			BLOOD ABSORPTION	+	
			SPLEEN			HEMOSIDEROSIS EXTRAMEDULLARY HEMATOPOIESIS	++ +	
			NASAL CAVITY			INFILTRATION OF LEUCOCYTES	+	
			LARYNGOPHARYNX			INFILTRATION OF LEUCOCYTES	+	
			LUNG			HEMORRHAGE INFILTRATION OF LEUCOCYTES CALCIFICATION OF VASCULAR WALL	++ + +	
			LIVER			CHOLANGIOFIBROSIS INFILTRATION OF LEUCOCYTES FATTY DEGENERATION OF HEPATIC CELLS MACROPHAGE MIGRATION IN PERIVASCULAR AREA GRANULATION FOCAL ATROPHY OF HEPATIC CELLS	++ + + + + +	
			PANCREAS			INFILTRATION OF LEUCOCYTES	+	

1) FATE : Y , KILLED ON SCHEDULE

2) GRADE : NEGATIVE NOT PRESENTED
+ , SLIGHT
++ , MODERATE
+++ , SEVERE

3) GRADE OF MASS :

A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F4-1301 CONTINUED
CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 1000 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1301	Y	740	PANCREAS			ATROPHY OF PANCREATIC ACINUS	+	
			KIDNEYS			PIGMENTATION (BILATERAL)	++	
						CALCIFICATION (BILATERAL)	+	
						CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL)	+	
						INFILTRATION OF LEUCOCYTES (BILATERAL)	+	
			URINARY BLADDER			INFILTRATION OF LEUCOCYTES	+	
			UTERUS			PIGMENTATION	+	
			PITUITARY GLAND			HYPERPLASIA OF CHROMOPHOBE CELLS CYST	++ +	
			ADRENAL GLANDS			VACUOLAR DEGENERATION OF CORTICAL CELLS (UNILATERAL)	+	
			HARDERIAN GLANDS			INFILTRATION OF LEUCOCYTES (BILATERAL)	+	
			BRAIN			PIGMENTATION	+	
			SPINAL CORD			PIGMENTATION	+	

1) FATE : Y , KILLED ON SCHEDULE
2) GRADE : NEGATIVE NOT PRESENTED
+ , SLIGHT
++ , MODERATE
+++ , SEVERE
3) GRADE OF MASS :
A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE
4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F4-1302
CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 1000 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1302	X	621	THORACIC CAVITY	PLEURAL FLUID	+			SQUAMOUS CELL CARCINOMA : CLITORAL GLAND
			ABDOMINAL CAVITY	ASCITES	+			
			HEART			FIBROSIS	+	
			THYMUS			HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	+	
			LYMPH NODES (SUBMAXI.) SPLEEN			ANGIECTASIA	++	
						HEMOSIDEROSIS	+	
						EXTRAMEDULLARY HEMATOPOIESIS	++	
						ATROPHY	++	
			BONE MARROW			ACTIVATION OF HEMATOPOIESIS	+++	
			NASAL CAVITY			CONGESTION	+	
						EDEMA	+	
						INFILTRATION OF LEUCOCYTES	+	
						HYPERPLASIA OF MUCOSAL EPITHELIUM	++	
			LARYNGOPHARYNX			INFILTRATION OF LEUCOCYTES	+	
			LUNG			CALCIFICATION OF VASCULAR WALL	+	
						CONGESTION	+	
						MIGRATION OF MACROPHAGE IN ALVEOLI	+	
			LIVER			FATTY DEGENERATION OF HEPATIC CELLS	++	

1) FATE : X , FOUND DEAD 2) GRADE : NEGATIVE NOT PRESENTED 3) GRADE OF MASS :
+ , SLIGHT A , SMALL AND/OR SINGULAR
++ , MODERATE B , MEDIAL AND/OR SPORADIC
+++ , SEVERE C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F4-1302 CONTINUED
CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 1000 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE DAYS	4) ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1302	X	621	LIVER		ANGIECTASIA SMALL GRANULOMA FOCAL ATROPHY OF HEPATIC CELLS CONGESTION	++ + + +	
			KIDNEYS		ROUGHNESS OF SURFACE (BILATERAL) IMPRESSION (UNILATERAL)	+ +	CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (UNILATERAL) PIGMENTATION (BILATERAL) INFILTRATION OF LEUCOCYTES (BILATERAL)
			OVARIES		CONGESTION (BILATERAL)	++	
			UTERUS		PIGMENTATION	+	
			VAGINA		ATROPHY	++	
			CLITORAL GLAND		MASS		
			ADRENAL GLANDS		C		SQUAMOUS CELL CARCINOMA CONGESTION (BILATERAL) HEMORRHAGE (UNILATERAL) ANGIECTASIA (BILATERAL) HYPERPLASIA OF MEDULLARY CELLS (UNILATERAL) VACUOLAR DEGENERATION OF CORTICAL CELLS (UNILATERAL)
			MUSCLE (Q. FEMORIS) SKIN (SUBCUTIS)		EDEMA	+++	INFILTRATION OF LEUCOCYTES

1) FATE : X , FOUND DEAD
2) GRADE : NEGATIVE NOT PRESENTED
3) GRADE OF MASS :
A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE
4) DAYS : AFTER START OF TREATMENT
+ , SLIGHT
++ , MODERATE
+++ , SEVERE

APPENDIX 11-F4-1302 CONTINUED
 CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
 OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 1000 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1302	X	621	BRAIN			PIGMENTATION	+	
			SPINAL CORD			PIGMENTATION	+	

1) FATE : X , FOUND DEAD
 2) GRADE : NEGATIVE NOT PRESENTED
 3) GRADE OF MASS :
 A , SMALL AND/OR SINGULAR
 B , MEDIAL AND/OR SPORADIC
 C , LARGE AND/OR MULTIPLE
 4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F4-1303

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 1000 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2) 3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1303	Y	740	HEART			FIBROSIS	+	NO SIGNIFICANT LESION
			THYMUS			HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	+	
			LYMPH NODES (PULM. HILUS) SPLEEN			BLOOD ABSORPTION	+	
						EXTRAMEDULLARY HEMATOPOIESIS HEMOSIDEROSIS	+	
			BONE MARROW			HYPOHEMATOPOIESIS	+	
			NASAL CAVITY			INFILTRATION OF LEUCOCYTES	+	
			LUNG			HISTIOCYTOSIS CALCIFICATION OF VASCULAR WALL	+	
			LIVER			PROLIFERATION OF BILE DUCT WITH FIBROSIS FATTY DEGENERATION OF HEPATIC CELLS FOCAL ATROPHY OF HEPATIC CELLS INFILTRATION OF LEUCOCYTES SMALL GRANULOMA MACROPHAGE MIGRATION IN PERIVASCULAR AREA	+	
			PANCREAS			ATROPHY OF PANCREATIC ACINUS	++	
			KIDNEYS			PIGMENTATION (BILATERAL)	++	

1) FATE : Y , KILLED ON SCHEDULE 2) GRADE : NEGATIVE NOT PRESENTED 3) GRADE OF MASS :
 + , SLIGHT A , SMALL AND/OR SINGULAR
 ++ , MODERATE B , MEDIAL AND/OR SPORADIC
 +++ , SEVERE C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F4-1303 CONTINUED
 CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
 OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 1000 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1303	Y	740	KIDNEYS			REGENERATIVE RENAL TUBULE (UNILATERAL) URINE CAST (BILATERAL) INFILTRATION OF LEUCOCYTES (UNILATERAL) CALCIFICATION (BILATERAL) INFILTRATION OF LEUCOCYTES (UNILATERAL)	+	
			OVARIES			INFILTRATION OF LEUCOCYTES (UNILATERAL)	++	
			UTERUS			PIGMENTATION	+	
			ADRENAL GLANDS			VACUOLAR DEGENERATION OF CORTICAL CELLS (UNILATERAL)	+	
			SKIN			INFILTRATION OF LEUCOCYTES	+	
			HARDERIAN GLANDS			INFILTRATION OF LEUCOCYTES (UNILATERAL)	+	
			BRAIN			PIGMENTATION	+	
			SPINAL CORD			PIGMENTATION	+	

1) FATE : Y , KILLED ON SCHEDULE
 4) DAYS : AFTER START OF TREATMENT

2) GRADE : NEGATIVE NOT PRESENTED
 + , SLIGHT
 ++ , MODERATE
 +++ , SEVERE

3) GRADE OF MASS :
 A , SMALL AND/OR SINGULAR
 B , MEDIAL AND/OR SPORADIC
 C , LARGE AND/OR MULTIPLE

APPENDIX 11-F4-1304

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 1000 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1304	Y	740	HEART			FIBROSIS	+	PHEOCHROMOCYTOMA: ADRENAL GLANDS
			THYMUS			HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	+	
			LYMPH NODES (PULM. HILUS) SPLEEN			BLOOD ABSORPTION	+	
						HEMOSIDEROSIS	++	
						EXTRAMEDULLARY HEMATOPOIESIS	+	
			NASAL CAVITY			INFILTRATION OF LEUCOCYTES	+	
			LUNG			INFILTRATION OF LEUCOCYTES	+	
						CALCIFICATION OF VASCULAR WALL	+	
			LIVER			FATTY DEGENERATION OF HEPATIC CELLS	+	
						SMALL GRANULOMA	+	
						INFILTRATION OF LEUCOCYTES	+	
						FOCAL ATROPHY OF HEPATIC CELLS	++	
			PANCREAS			INFILTRATION OF LEUCOCYTES	+	
			KIDNEYS			PIGMENTATION (BILATERAL)	++	
						CALCIFICATION (BILATERAL)	+	
						CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL)	+	
			UTERUS			PIGMENTATION	+	
			PITUITARY GLAND			HYPERPLASIA OF CHROMOPHOBIC CELLS	++	

1) FATE : Y , KILLED ON SCHEDULE

2) GRADE : NEGATIVE NOT PRESENTED

+ , SLIGHT

++ , MODERATE

+++ , SEVERE

3) GRADE OF MASS :

A , SMALL AND/OR SINGULAR

B , MEDIAL AND/OR SPORADIC

C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F4-1304 CONTINUED
CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 1000 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1304	Y	740	PITUITARY GLAND			HEMORRHAGE MIGRATION OF HEMOSIDERIN-LADEN CELLS	+	
			ADRENAL GLANDS			VACUOLAR DEGENERATION OF CORTICAL CELLS (UNILATERAL) PHEOCHROMOCYTOMA (UNILATERAL)	+	
			BRAIN			PIGMENTATION	+	
			SPINAL CORD			PIGMENTATION	+	

1) FATE : Y , KILLED ON SCHEDULE
2) GRADE : NEGATIVE NOT PRESENTED
3) GRADE OF MASS :
A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT
+ , SLIGHT
++ , MODERATE
+++ , SEVERE

APPENDIX 11-F4-1305

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 1000 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	2) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1305	W	690	MULTIPLE ORGANS			MYELOCYTIC LEUKEMIA		ADENOCARCINOMA: CLITORAL GLAND
			HEART			FIBROSIS	+	MYELOCYTIC LEUKEMIA
			THYMUS			HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	+	MULTIPLE ORGANS ADENOMA: PITUITARY GLAND PAPILLARY ADENOMA: LUNG
			SPLEEN	ENLARGEMENT MASS	+++ A	CONGESTION ATROPHY	+++ ++	
			NASAL CAVITY			INFILTRATION OF LEUCOCYTES	+	
			LUNG			PAPILLARY ADENOMA HISTIOCYTOSIS	+	
			LIVER	ROUGHNESS OF SURFACE YELLOWISH CHANGE	+++ +	FATTY DEGENERATION OF HEPATIC CELLS HEMORRHAGE INFILTRATION OF LEUCOCYTES FOCAL NECROSIS GRANULAR DEGENERATION MACROPHAGE MIGRATION IN PERIVASCULAR AREA FIBROSIS EXTRAMEDULLARY HEMATOPOIESIS	++ + + ++ +++ +	
			PANCREAS			ATROPHY OF PANCREATIC ACINUS	+	
			KIDNEYS			PIGMENTATION (BILATERAL)	+++	

1) FATE : W , KILLED IN EXTREMIS

2) GRADE : NEGATIVE NOT PRESENTED

+ , SLIGHT

++ , MODERATE

+++ , SEVERE

3) GRADE OF MASS :

A , SMALL AND/OR SINGULAR

B , MEDIAL AND/OR SPORADIC

C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F4-1305 CONTINUED

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 1000 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1305	W	690	KIDNEYS					
			URINARY BLADDER	EXPANSION	+			INFILTRATION OF LEUCOCYTES (BILATERAL)
			OVARIES					INFILTRATION OF LEUCOCYTES (UNILATERAL)
			UTERUS					DILATATION OF DUCT
			CLITORAL GLAND	MASS	C			ADENOCARCINOMA
			PITUITARY GLAND	ENLARGEMENT	++			ADENOMA
			THYROID GLANDS					ENLARGEMENT OF FOLLICLE(UNILATERAL) ++
			ADRENAL GLANDS					VACUOLAR DEGENERATION OF CORTICAL CELLS (BILATERAL) +++
								HEMORRHAGE (BILATERAL) ++
			BONE (FEMUR)					OSTEOSCLEROSIS +
			EYE BALLS	GRAYISH CHANGE (UNILATERAL)	+			CATARACT (UNILATERAL) +
								RETINAL ATROPHY (UNILATERAL) ++
			BRAIN					PIGMENTATION +
			SPINAL CORD					PIGMENTATION +

1) FATE : W / KILLED IN EXTREMIS

2) GRADE : NEGATIVE NOT PRESENTED

3) GRADE OF MASS :

A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

+ , SLIGHT
++ , MODERATE
+++ , SEVERE

APPENDIX 11-F4-1306

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 1000 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1306	Y	740	HEART			INFILTRATION OF LEUCOCYTES FIBROSIS	+	NO SIGNIFICANT LESION
			THYMUS			HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	++	
			LYMPH NODES (PULM.HILUS) SPLEEN			BLOOD ABSORPTION	+	
						HEMOSIDEROSIS	++	
						EXTRAMEDULLARY HEMATOPOIESIS	+	
			NASAL CAVITY			INFILTRATION OF LEUCOCYTES	+	
			LARYNGOPHARYNX			INFILTRATION OF LEUCOCYTES	+	
						HYPERSECRETION	+	
			LUNG			INFILTRATION OF LEUCOCYTES	+	
			SUBLINGUAL GLANDS			DILATATION OF DUCT (UNILATERAL)	+	
			PAROTID GLANDS			INFILTRATION OF LEUCOCYTES (UNILATERAL)	+	
			LIVER			FATTY DEGENERATION OF HEPATIC CELLS SMALL GRANULOMA	+	
						FOCAL ATROPHY OF HEPATIC CELLS	+	
						INFILTRATION OF LEUCOCYTES	+	
						MACROPHAGE MIGRATION IN PERIVASCULAR AREA	+	
			PANCREAS			INFILTRATION OF LEUCOCYTES	+	

1) FATE : Y / KILLED ON SCHEDULE 2) GRADE : NEGATIVE NOT PRESENTED 3) GRADE OF MASS :
 + / SLIGHT A / SMALL AND/OR SINGULAR
 ++ / MODERATE B / MEDIAL AND/OR SPORADIC
 +++ / SEVERE C / LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F4-1306 CONTINUED
CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 1000 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1306	Y	740	KIDNEYS			CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) INFILTRATION OF LEUCOCYTES (BILATERAL) PIGMENTATION (BILATERAL) CALCIFICATION (BILATERAL)	++ +	
			UTERUS			PIGMENTATION	+	
			PITUITARY GLAND			HEMORRHAGE CYST MIGRATION OF HEMOSIDERIN-LADEN CELLS	++ +	
			ADRENAL GLANDS			VACUOLAR DEGENERATION OF CORTICAL CELLS (UNILATERAL)	+	
			HARDERIAN GLANDS			INFILTRATION OF LEUCOCYTES (BILATERAL)	+	
			BRAIN			PIGMENTATION	+	
			SPINAL CORD			PIGMENTATION	+	

1) FATE : Y , KILLED ON SCHEDULE
2) GRADE : NEGATIVE NOT PRESENTED
+ , SLIGHT
++ , MODERATE
+++ , SEVERE
3) GRADE OF MASS :
A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE
4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F4-1307

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 1000 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1307	Y	740	MULTIPLE ORGANS					
			HEART			MONONUCLEAR CELL LEUKEMIA		THYMOMA: THYMUS PHEOCHROMOCYTOMA: ADRENAL GLANDS
			THYMUS			FIBROSIS	+	C-CELL ADENOMA: THYROID GLANDS
			LYMPH NODES (PULM.HILUS)			THYMOMA		MONONUCLEAR CELL LEUKEMIA
			SPLEEN			BLOOD ABSORPTION	+	: MULTIPLE ORGANS
			ENLARGEMENT		++	HEMOSIDEROSIS	+	
			BONE MARROW			ACTIVATION OF HEMATOPOIESIS	+	
			NASAL CAVITY			INFILTRATION OF LEUCOCYTES	+	
			LARYNGOPHARYNX			INFILTRATION OF LEUCOCYTES	+	
			LUNG			CALCIFICATION OF VASCULAR WALL	+	
			SUBLINGUAL GLANDS			INFILTRATION OF LEUCOCYTES (UNILATERAL)	+	
			LIVER		+	FOCAL ATROPHY OF HEPATIC CELLS INFILTRATION OF LEUCOCYTES MACROPHAGE MIGRATION IN PERIVASCULAR AREA FATTY DEGENERATION OF HEPATIC CELLS PROLIFERATION OF BILE DUCT WITH FIBROSIS	++ + + + + +	

1) FATE : Y , KILLED ON SCHEDULE

2) GRADE : NEGATIVE NOT PRESENTED

+ , SLIGHT
++ , MODERATE
+++ , SEVERE

3) GRADE OF MASS :

A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F4-1307 CONTINUED
CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 1000 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1307	Y	740	LIVER					
			PANCREAS			FOCAL NECROSIS	+	
			KIDNEYS			ATROPHY OF PANCREATIC ACINUS	+	
						PIGMENTATION (BILATERAL)	++	
						CALCIFICATION (BILATERAL)	+	
						CHRONIC PROGRESSIVE	+	
						GLOMERULONEPHROPATHY (BILATERAL)	+	
						INFILTRATION OF LEUCOCYTES (BILATERAL)	+	
			UTERUS			INFILTRATION OF LEUCOCYTES PIGMENTATION	+	
							+	
			THYROID GLANDS	ENLARGEMENT (BILATERAL)	+	C-CELL ADENOMA (BILATERAL)		
			ADRENAL GLANDS	ENLARGEMENT (UNILATERAL)	+	PHEOCHROMOCYTOMA (UNILATERAL) HEMORRHAGE (BILATERAL) ANGIECTASIA (UNILATERAL) VACUOLAR DEGENERATION OF CORTICAL CELLS (UNILATERAL)	+	
							+	
			BRAIN			PIGMENTATION	+	
			SPINAL CORD			PIGMENTATION	+	

1) FATE : Y , KILLED ON SCHEDULE

2) GRADE : NEGATIVE NOT PRESENTED

3) GRADE OF MASS :

A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

+, SLIGHT
++, MODERATE
+++, SEVERE

APPENDIX 11-F4-1308
CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 1000 PPM FEMALE

STUDY NO. 83004																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
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1) FATE : W , KILLED IN EXTREMIS

2) GRADE : NEGATIVE NOT PRESENTED

+ , SLIGHT
++ , MODERATE
+++ , SEVERE

3) GRADE OF MASS :

A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F4-1308 CONTINUED
CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 1000 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1308	W	722	LIVER					
			KIDNEYS					
						FATTY DEGENERATION OF HEPATIC CELLS	+	
						CALCIFICATION (BILATERAL)	+	
						INFILTRATION OF LEUCOCYTES (BILATERAL)	+	
						PIGMENTATION (BILATERAL)	++	
						THICKENING OF BASEMENT MAMBRANE (BILATERAL)	+	
						REGENERATIVE RENAL TUBULE (BILATERAL)	+	
						URINE CAST (BILATERAL)	+	
						GLOMERULOSCLEROSIS (BILATERAL)	+	
			URINARY BLADDER	EXPANSION	+			
			UTERUS			PIGMENTATION DILATATION OF DUCT	+	
			THYROID GLANDS			C-CELL ADENOMA (UNILATERAL)		
			ADRENAL GLANDS			EXTRAMEDULLARY HEMATOPOIESIS (BILATERAL)	+	
			BONE (FEMUR)			OSTEOSCLEROSIS	++	
			MAMMARY GLAND	MASS	C	FIBROADENOMA		
			HARDERIAN GLANDS			INFILTRATION OF LEUCOCYTES (UNILATERAL)	+	

1) FATE : W , KILLED IN EXTREMIS

2) GRADE : NEGATIVE NOT PRESENTED

3) GRADE OF MASS :

A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

+, SLIGHT
++, MODERATE
+++, SEVERE

APPENDIX 11-F4-1308 CONTINUED

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 1000 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	2) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1308	W	722	BRAIN			PIGMENTATION	+	
			SPINAL CORD			PIGMENTATION	+	

1) FATE : W , KILLED IN EXTREMIS

2) GRADE : NEGATIVE NOT PRESENTED

3) GRADE OF MASS :

A , SMALL AND/OR SINGULAR

B , MEDIAL AND/OR SPORADIC

C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

2) GRADE : + , SLIGHT

++ , MODERATE

+++ , SEVERE

APPENDIX 11-F4-1309
CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 1000 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1309	W	732	MULTIPLE ORGANS			MONONUCLEAR CELL LEUKEMIA		FIBROADENOMA: MAMMARY GLAND
			HEART			FIBROSIS	+	MONONUCLEAR CELL LEUKEMIA
			THYMUS			HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	+	: MULTIPLE ORGANS
			LYMPH NODES (MESENT.)	ENLARGEMENT	+			
			SPLEEN	ENLARGEMENT NODULE	+++ +	CAPSULITIS HEMOSIDEROSIS	+	
			NASAL CAVITY			INFILTRATION OF LEUCOCYTES	+	
			LARYNGOPHARYNX			INFILTRATION OF LEUCOCYTES	+	
			LUNG			GRANULATION CALCIFICATION OF VASCULAR WALL	+	
			ESOPHAGUS			HYPERKERATOSIS	+	
			STOMACH			EDEMA	+	
			LIVER	ENLARGEMENT YELLOWISH CHANGE	+ ++	FATTY DEGENERATION OF HEPATIC CELLS CONGESTION CHOLANGIOFIBROSIS	++ +	
			KIDNEYS			CALCIFICATION (BILATERAL)	+	

1) FATE : W / KILLED IN EXTREMIS

2) GRADE : NEGATIVE NOT PRESENTED

3) GRADE OF MASS :

A / SMALL AND/OR SINGULAR
B / MEDIAL AND/OR SPORADIC
C / LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F4-1309 CONTINUED
CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 1000 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1309	W	732	KIDNEYS			URINE CAST (BILATERAL) INFILTRATION OF LEUCOCYTES (BILATERAL) REGENERATIVE RENAL TUBULE (BILATERAL) PIGMENTATION (BILATERAL) THICKENING OF BASEMENT MAMBRANE (BILATERAL)	+ + + ++ +	
			UTERUS	ENLARGEMENT	+	DILATATION OF DUCT	+++	
			PITUITARY GLAND			HYPERPLASIA OF CHROMOPHOBE CELLS HEMORRHAGE MIGRATION OF HEMOSIDERIN-LADEN CELLS	+ + +	
			THYROID GLANDS			HYPERPLASIA OF C-CELLS (BILATERAL)	+	
			ADRENAL GLANDS			VACUOLAR DEGENERATION OF CORTICAL CELLS (BILATERAL)	+++	
			BONE (FEMUR)			OSTEOSCLEROSIS	+	
			MAMMARY GLAND			FIBROADENOMA		
			EYE BALLS			CALCIFICATION, SCLERA (UNILATERAL)	+	
			HARDERIAN GLANDS			INFILTRATION OF LEUCOCYTES (BILATERAL)	+	

1) FATE : W , KILLED IN EXTREMIS

2) GRADE : NEGATIVE NOT PRESENTED

+ , SLIGHT
++ , MODERATE
+++ , SEVERE

3) GRADE OF MASS :

A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F4-1309 CONTINUED
CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 1000 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1309	W	732	HARDERIAN GLANDS			HYPERSECRETION (BILATERAL)	+	
			BRAIN	HEMORRHAGE	++	HEMORRHAGE PIGMENTATION	+	
			SPINAL CORD			PIGMENTATION	+	

1) FATE : W , KILLED IN EXTREMIS
2) GRADE : NEGATIVE NOT PRESENTED
+ , SLIGHT
++ , MODERATE
+++ , SEVERE
3) GRADE OF MASS :
A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE
4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F4-1310

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 1000 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1310	Y	740	HEART	NODULE	+	FIBROSIS INFILTRATION OF LEUCOCYTES	++ +	FIBROADENOMA: MAMMARY GLAND
			THYMUS			HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	+	
			LYMPH NODES (PULM.HILUS) SPLEEN			BLOOD ABSORPTION	+	
						HEMOSIDEROSIS EXTRAMEDULLARY HEMATOPOIESIS	+++ +	
			NASAL CAVITY			FOREIGN BODY GRANULOMA INFILTRATION OF LEUCOCYTES CALCIFICATION	++ ++ +	
			LUNG	WHITISH PATCH	+	PLEURISY INFILTRATION OF LEUCOCYTES OSSEOUS TISSUE CALCIFICATION OF VASCULAR WALL	++ ++ ++ +	
			CECUM			HEMORRHAGE	+	
			LIVER			FOCAL ATROPHY OF HEPATIC CELLS FATTY DEGENERATION OF HEPATIC CELLS SMALL GRANULOMA INFILTRATION OF LEUCOCYTES MACROPHAGE MIGRATION IN PERIVASCULAR AREA	++ ++ ++ ++ +	
			KIDNEYS			CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL)	++	

1) FATE : Y , KILLED ON SCHEDULE

2) GRADE : NEGATIVE NOT PRESENTED

3) GRADE OF MASS :

A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

+ , SLIGHT
++ , MODERATE
+++ , SEVERE

APPENDIX 11-F4-1310 CONTINUED
CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 1000 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1310	Y	740	KIDNEYS					
			UTERUS					
						PIGMENTATION (BILATERAL)	++	
						INFILTRATION OF LEUCOCYTES (BILATERAL)	+	
						CALCIFICATION (BILATERAL)	+	
						PIGMENTATION	+	
						INFILTRATION OF LEUCOCYTES	+	
			PITUITARY GLAND	REDDISH PATCH	+	MIGRATION OF HEMOSIDERIN-LADEN CELLS	++	
			THYROID GLANDS			HYPERPLASIA OF C-CELLS (UNILATERAL)	+	
			ADRENAL GLANDS			INFILTRATION OF LEUCOCYTES (UNILATERAL)	+	
			MAMMARY GLAND	MASS	B	FIBROADENOMA		
			EYE BALLS			CALCIFICATION, SCLERA (UNILATERAL)	+	
			HARDERIAN GLANDS			INFILTRATION OF LEUCOCYTES (UNILATERAL)	+	
			BRAIN			PIGMENTATION	+	
			SPINAL CORD			PIGMENTATION	+	

2) GRADE : NEGATIVE NOT PRESENTED
+ , SLIGHT
++ , MODERATE
+++ , SEVERE

3) GRADE OF MASS :

A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE

1) FATE : Y , KILLED ON SCHEDULE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F4-1311

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 1000 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1311	W	671	HEART			FIBROSIS	+	FIBROADENOMA: MAMMARY GLAND
			THYMUS			HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	+	ENDOMETRIAL STROMAL SARCOMA: UTERUS
			SPLEEN	ENLARGEMENT	+	HEMOSIDEROSIS EXTRAMEDULLARY HEMATOPOIESIS	+	
			NASAL CAVITY			INFILTRATION OF LEUCOCYTES	++	
			LUNG			HISTIOCYTOSIS CALCIFICATION OF VASCULAR WALL	+	
			STOMACH			INFILTRATION OF LEUCOCYTES EROSION	+	
			RECTUM	ADHESION CONSTIPATION	+	HEMORRHAGE	++	
			LIVER			FATTY DEGENERATION OF HEPATIC CELLS MACROPHAGE MIGRATION IN PERIVASCULAR AREA SMALL GRANULOMA CAPSULITIS INFILTRATION OF LEUCOCYTES FOCAL ATROPHY OF HEPATIC CELLS CHOLANGIOFIBROSIS	+	
			PANCREAS			INFILTRATION OF LEUCOCYTES	+	

1) FATE : W / KILLED IN EXTREMIS

2) GRADE : NEGATIVE NOT PRESENTED

+ / SLIGHT
++ / MODERATE
+++ / SEVERE

3) GRADE OF MASS :

A / SMALL AND/OR SINGULAR
B / MEDIAL AND/OR SPORADIC
C / LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F4-1311 CONTINUED
CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 1000 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1311	W	671	PANCREAS			ATROPHY OF PANCREATIC ACINUS	+	
			KIDNEYS			CALCIFICATION (BILATERAL) INFILTRATION OF LEUCOCYTES (BILATERAL)	+	
						CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL)	+	
						PIGMENTATION (BILATERAL)	++	
			UTERUS	MASS	C	ENDOMETRIAL STROMAL SARCOMA PIGMENTATION	+	
			VAGINA			ATROPHY	++	
			MAMMARY GLAND	MASS	C	FIBROADENOMA		
			HARDERIAN GLANDS			INFILTRATION OF LEUCOCYTES (UNILATERAL)	+	
			BRAIN			PIGMENTATION	+	
			SPINAL CORD			PIGMENTATION	+	

1) FATE : W , KILLED IN EXTREMIS
2) GRADE : NEGATIVE NOT PRESENTED
+ , SLIGHT
++ , MODERATE
+++ , SEVERE
3) GRADE OF MASS :
A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE
4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F4-1312

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 1000 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1312	W	652	PERITONEUM	MASS	B	MESENCHYMOA		LIPOMA: SKIN (SUBCUTIS) MESENCHYMOA: SKIN
			HEART			FIBROSIS	+	(SUBCUTIS)
			THYMUS			HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	+	MESENCHYMOA: PERITONEUM MESENCHYMOA: VAGINA
			SPLEEN	ENLARGEMENT	+++	EXTRAMEDULLARY HEMATOPOIESIS	+++	
			BONE MARROW			ACTIVATION OF HEMATOPOIESIS	+++	
			NASAL CAVITY			INFILTRATION OF LEUCOCYTES	+	
			LARYNGOPHARYNX			INFILTRATION OF LEUCOCYTES CALCIFICATION OF VASCULAR WALL	+	
			LUNG	DISCOLORATION	+		+	
			LIVER	DISCOLORATION	+++	INFILTRATION OF LEUCOCYTES SWELLING OF KUPFFER CELLS CHOLANGIOFIBROSIS	+	
			KIDNEYS			PIGMENTATION (BILATERAL) INFILTRATION OF LEUCOCYTES (BILATERAL)	+	
						URINE CAST (BILATERAL) CALCIFICATION (UNILATERAL)	+	
			UTERUS			PIGMENTATION	+	

1) FATE : W , KILLED IN EXTREMIS

2) GRADE : NEGATIVE NOT PRESENTED

+ , SLIGHT
++ , MODERATE
+++ , SEVERE

3) GRADE OF MASS :

A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F4-1312 CONTINUED
CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 1000 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1312	W	652	UTERUS			INFILTRATION OF LEUCOCYTES	+	
			VAGINA	MASS	C	MESENCHYMOMA		
			THYROID GLANDS			HYPERPLASIA OF C-CELLS (BILATERAL)	+	
			ADRENAL GLANDS			VACUOLAR DEGENERATION OF CORTICAL CELLS (BILATERAL)	++	
			SKIN (SUBCUTIS)	MASS NODULE	C +	MESENCHYMOMA LIPOMA		
			BRAIN			PIGMENTATION	+	

1) FATE : W , KILLED IN EXTREMIS
2) GRADE : NEGATIVE NOT PRESENTED
+ , SLIGHT
++ , MODERATE
+++ , SEVERE
3) GRADE OF MASS :
A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE
4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F4-1313

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 1000 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1313	Y	740	HEART			FIBROSIS INFILTRATION OF LEUCOCYTES	+	ADENOMA: PITUITARY GLAND PHEOCHROMOCYTOMA: ADRENAL GLANDS
			THYMUS			HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	+	
			LYMPH NODES (PULM.HILUS) SPLEEN			BLOOD ABSORPTION EXTRAMEDULLARY HEMATOPOIESIS HEMOSIDEROSIS	+	
			NASAL CAVITY			INFILTRATION OF LEUCOCYTES	++	
			LARYNGOPHARYNX			HYPERSECRETION	+	
			LUNG			INFILTRATION OF LEUCOCYTES	+	
			SUBMAXILLARY GLANDS			INFILTRATION OF LEUCOCYTES (UNILATERAL)	+	
			SUBLINGUAL GLANDS			INFILTRATION OF LEUCOCYTES (UNILATERAL)	+	
			LIVER			NODULE INFILTRATION OF LEUCOCYTES SMALL GRANULOMA MACROPHAGE MIGRATION IN PERIVASCULAR AREA	++ + + +	

1) FATE : Y , KILLED ON SCHEDULE

2) GRADE : NEGATIVE NOT PRESENTED

3) GRADE OF MASS :

A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE

+ , SLIGHT

++ , MODERATE

+++ , SEVERE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F4-1313 CONTINUED
CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 1000 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1313	Y	740	LIVER					
			PANCREAS					FOCAL ATROPHY OF HEPATIC CELLS + FATTY DEGENERATION OF HEPATIC CELLS + PROLIFERATION OF BILE DUCT +
			KIDNEYS					INFILTRATION OF LEUCOCYTES + INFILTRATION OF LEUCOCYTES + (BILATERAL) URINE CAST (BILATERAL) + REGENERATIVE RENAL TUBULE + (BILATERAL) PIGMENTATION (BILATERAL) + THICKENING OF BASEMENT MAMBRANE + (BILATERAL) HYALINE DROPLET DEGENERATION + (BILATERAL) CALCIFICATION (BILATERAL) + GLOMERULOSCLEROSIS + (UNILATERAL)
			UTERUS					PIGMENTATION +
			VAGINA					INFILTRATION OF LEUCOCYTES +
			PITUITARY GLAND					ADENOMA
			THYROID GLANDS					HYPERPLASIA OF C-CELLS (BILATERAL) +
			ADRENAL GLANDS					PHEOCHROMOCYTOMA (UNILATERAL)

1) FATE : Y , KILLED ON SCHEDULE 2) GRADE : NEGATIVE NOT PRESENTED 3) GRADE OF MASS :
+ , SLIGHT A , SMALL AND/OR SINGULAR
++ , MODERATE B , MEDIAL AND/OR SPORADIC
+++ , SEVERE C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F4-1313 CONTINUED
CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 1000 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1313	Y	740	ADRENAL GLANDS					
			MAMMARY GLAND			HEMORRHAGE (UNILATERAL) VACUOLAR DEGENERATION OF CORTICAL CELLS (UNILATERAL)	+	
			HARDERIAN GLANDS			HYPERSECRETION	++	
			BRAIN			INFILTRATION OF LEUCOCYTES (BILATERAL)	+	
			SPINAL CORD			PIGMENTATION	+	
						PIGMENTATION	+	

1) FATE : Y , KILLED ON SCHEDULE 2) GRADE : NEGATIVE NOT PRESENTED 3) GRADE OF MASS :
+ , SLIGHT A , SMALL AND/OR SINGULAR
++ , MODERATE B , MEDIAL AND/OR SPORADIC
+++ , SEVERE C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F4-1314
CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 1000 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1314	Y	740	MULTIPLE ORGANS			MONONUCLEAR CELL LEUKEMIA		MONONUCLEAR CELL LEUKEMIA
			HEART			FIBROSIS	+	
						INFILTRATION OF LEUCOCYTES	+	
			THYMUS			HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	++	
						BLOOD ABSORPTION	+	
			LYMPH NODES (PULM. HILUS)			EXTRAMEDULLARY HEMATOPOIESIS	+	
			LYMPH NODES (MESENT.)					
			SPLEEN					
			ENLARGEMENT		+++	HEMOSIDEROSIS CONGESTION EXTRAMEDULLARY HEMATOPOIESIS PROLIFERATION OF RETICULAR CELLS	+	
						PROLIFERATION OF RETICULAR CELLS	++	
			BONE MARROW					
			NASAL CAVITY			INFILTRATION OF LEUCOCYTES	++	
			LARYNGOPHARYNX			INFILTRATION OF LEUCOCYTES	+	
			LUNG			CALCIFICATION OF VASCULAR WALL	+	
			STOMACH			INFILTRATION OF LEUCOCYTES	+	
			LIVER		+++ B	PROLIFERATION OF BILE DUCT WITH FIBROSIS	+	
			ENLARGEMENT MASS					

1) FATE : Y , KILLED ON SCHEDULE 2) GRADE : NEGATIVE NOT PRESENTED 3) GRADE OF MASS :
+ , SLIGHT A , SMALL AND/OR SINGULAR
++ , MODERATE B , MEDIAL AND/OR SPORADIC
+++ , SEVERE C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F4-1314 CONTINUED
CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 1000 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1314	Y	740	LIVER			FATTY DEGENERATION OF HEPATIC CELLS EXTRAMEDULLARY HEMATOPOIESIS SMALL GRANULOMA MACROPHAGE MIGRATION IN PERIVASCULAR AREA FOCAL NECROSIS	++ ++ ++ ++	
			KIDNEYS			CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) PIGMENTATION (BILATERAL) CALCIFICATION (UNILATERAL) INFILTRATION OF LEUCOCYTES (UNILATERAL)	+ + + +	
			OVARIES	CYST (UNILATERAL)	+	FOLLICULAR CYST (UNILATERAL)	+	
			UTERUS			INFILTRATION OF LEUCOCYTES PIGMENTATION	+ +	
			VAGINA			HYPERPLASIA OF MUCOSAL EPITHELIUM	++	
			PITUITARY GLAND			CYST	+	
			THYROID GLANDS			HYPERPLASIA OF C-CELLS (BILATERAL)	+	
			ADRENAL GLANDS			INFILTRATION OF LEUCOCYTES (UNILATERAL)	+	

1) FATE : Y , KILLED ON SCHEDULE
2) GRADE : NEGATIVE NOT PRESENTED
3) GRADE OF MASS :
+ , SLIGHT
++ , MODERATE
+++ , SEVERE
A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE

APPENDIX 11-F4-1314 CONTINUED

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 1000 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1314	Y	740	ADRENAL GLANDS			VACUOLAR DEGENERATION OF CORTICAL CELLS (BILATERAL)	+	
			SKIN	MASS	A	EPIDERMOID CYST	+++	
			MAMMARY GLAND			HYPERPLASIA	++	
			BRAIN			PIGMENTATION	+	
			SPINAL CORD			PIGMENTATION	+	

1) FATE : Y , KILLED ON SCHEDULE 2) GRADE : NEGATIVE NOT PRESENTED 3) GRADE OF MASS :
+ , SLIGHT A , SMALL AND/OR SINGULAR
++ , MODERATE B , MEDIAL AND/OR SPORADIC
+++ , SEVERE C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F4-1315

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 1000 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1315	X	719	MULTIPLE ORGANS			MONONUCLEAR CELL LEUKEMIA		MONONUCLEAR CELL LEUKEMIA : MULTIPLE ORGANS
			HEART			FIBROSIS	+	
			THYMUS			HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	+	
			SPLEEN	ENLARGEMENT	+++	HEMORRHAGE	++	
			NASAL CAVITY			INFILTRATION OF LEUCOCYTES	+	
			LUNG			CALCIFICATION OF VASCULAR WALL	+	
			LIVER	ROUGHNESS OF SURFACE DISCOLORATION	+ +			
			KIDNEYS			PIGMENTATION (BILATERAL) CALCIFICATION (BILATERAL) URINE CAST (BILATERAL) INFILTRATION OF LEUCOCYTES (UNILATERAL) REGENERATIVE RENAL TUBULE (BILATERAL) THICKENING OF BASEMENT MAMBRANE (BILATERAL)	++ + + + + +	
			PITUITARY GLAND	ENLARGEMENT HEMORRHAGE	++ +	HEMORRHAGE	++	
			MAMMARY GLAND			HYPERPLASIA	+	

1) FATE : X , FOUND DEAD

2) GRADE : NEGATIVE NOT PRESENTED

3) GRADE OF MASS :

A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

+ , SLIGHT
++ , MODERATE
+++ , SEVERE

APPENDIX 11-F4-1315 CONTINUED
 CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
 OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 1000 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE DAYS	4) ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1315	X	719	BRAIN		PIGMENTATION	+	

1) FATE : X , FOUND DEAD	2) GRADE : NEGATIVE NOT PRESENTED + , SLIGHT ++ , MODERATE +++ , SEVERE	3) GRADE OF MASS : A , SMALL AND/OR SINGULAR B , MEDIAL AND/OR SPORADIC C , LARGE AND/OR MULTIPLE
4) DAYS : AFTER START OF TREATMENT		

APPENDIX 11-F4-1316

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 1000 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1316	Y	740	HEART			FIBROSIS	+	POLYP: UTERUS
			THYMUS			HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	+	
			NASAL CAVITY			INFILTRATION OF LEUCOCYTES CALCIFICATION	+	
			LUNG			CALCIFICATION OF VASCULAR WALL	+	
			PAROTID GLANDS			INFILTRATION OF LEUCOCYTES (UNILATERAL)	+	
			LIVER			SMALL GRANULOMA MACROPHAGE MIGRATION IN PERIVASCULAR AREA FATTY DEGENERATION OF HEPATIC CELLS CHOLANGIOFIBROSIS	+	
			KIDNEYS			PIGMENTATION (BILATERAL) INFILTRATION OF LEUCOCYTES (BILATERAL) URINE CAST (BILATERAL)	++ +	
			UTERUS	ENLARGEMENT	+	PIGMENTATION POLYP	+	
			PITUITARY GLAND			HYPERPLASIA OF CHROMOPHOBE CELLS	+	
			HARDERIAN GLANDS			GRANULATION (UNILATERAL)	+	

1) FATE : Y , KILLED ON SCHEDULE

2) GRADE : NEGATIVE NOT PRESENTED

3) GRADE OF MASS :

A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

+ , SLIGHT
++ , MODERATE
+++ , SEVERE

APPENDIX 11-F4-1316 CONTINUED
 CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
 OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 1000 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1316	Y	740	BRAIN			PIGMENTATION	+	
			SPINAL CORD			PIGMENTATION	+	

1) FATE : Y , KILLED ON SCHEDULE
 2) GRADE : NEGATIVE NOT PRESENTED
 + , SLIGHT
 ++ , MODERATE
 +++ , SEVERE
 3) GRADE OF MASS :
 A , SMALL AND/OR SINGULAR
 B , MEDIAL AND/OR SPORADIC
 C , LARGE AND/OR MULTIPLE
 4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F4-1317

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 1000 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1317	Y	741	HEART			FIBROSIS	+	POLYP: UTERUS
			THYMUS			HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	+	
			LYMPH NODES (PULM. HILUS)			BLOOD ABSORPTION	+	
			SPLEEN			HEMOSIDEROSIS EXTRAMEDULLARY HEMATOPOIESIS	+	
			NASAL CAVITY			INFILTRATION OF LEUCOCYTES	++	
			LARYNGOPHARYNX			INFILTRATION OF LEUCOCYTES	+	
			LUNG			CALCIFICATION OF VASCULAR WALL OSSEOUS TISSUE	+	
			LIVER			MACROPHAGE MIGRATION IN PERIVASCULAR AREA SMALL GRANULOMA ANGIECTASIA FOCAL ATROPHY OF HEPATIC CELLS INFILTRATION OF LEUCOCYTES FATTY DEGENERATION OF HEPATIC CELLS	+	
			KIDNEYS			INFILTRATION OF LEUCOCYTES (UNILATERAL) PIGMENTATION (BILATERAL)	+	
							++	

1) FATE : Y , KILLED ON SCHEDULE

2) GRADE : NEGATIVE NOT PRESENTED

+ , SLIGHT

++ , MODERATE

+++ , SEVERE

3) GRADE OF MASS :

A , SMALL AND/OR SINGULAR

B , MEDIAL AND/OR SPORADIC

C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F4-1317 CONTINUED

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 1000 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1317	Y	741	KIDNEYS					
			UTERUS					
						CALCIFICATION (BILATERAL)	+	
						CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL)	+	
						POLYP		
						PIGMENTATION	+	
			ADRENAL GLANDS			INFILTRATION OF LEUCOCYTES (BILATERAL)	+	
			BRAIN			PIGMENTATION	+	
			SPINAL CORD			PIGMENTATION	+	

1) FATE : Y , KILLED ON SCHEDULE	2) GRADE : NEGATIVE NOT PRESENTED + , SLIGHT ++ , MODERATE +++ , SEVERE	3) GRADE OF MASS : A , SMALL AND/OR SINGULAR B , MEDIAL AND/OR SPORADIC C , LARGE AND/OR MULTIPLE
4) DAYS : AFTER START OF TREATMENT		

APPENDIX 11-F4-1318
CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 1000 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1318	W	632	HEART	DISCOLORATION	+			ENDOMETRIAL STROMAL SARCOMA: UTERUS
			THYMUS			HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	++	C-CELL ADENOMA: THYROID GLANDS
			LYMPH NODES (THYMIC) SPLEEN	ENLARGEMENT	+			
						HEMOSIDEROSIS EXTRAMEDULLARY HEMATOPOIESIS	+ +++	
			NASAL CAVITY			INFILTRATION OF LEUCOCYTES	+	
			LUNG			CALCIFICATION OF VASCULAR WALL INFILTRATION OF LEUCOCYTES	+ +	
						ADENOMATOSIS HISTIOCYTOSIS	+ +	
			RECTUM			SEROSITIS	++	
			LIVER	YELLOWISH CHANGE	+	FATTY DEGENERATION OF HEPATIC CELLS SMALL GRANULOMA FOCAL NECROSIS EXTRAMEDULLARY HEMATOPOIESIS	+++ + ++ +	
			PANCREAS			SEROSITIS ATROPHY OF PANCREATIC ACINUS	++ +	
			KIDNEYS			PIGMENTATION (BILATERAL)	++	

1) FATE : W / KILLED IN EXTREMIS

2) GRADE : NEGATIVE NOT PRESENTED
+ , SLIGHT
++ , MODERATE
+++ , SEVERE

3) GRADE OF MASS :
A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F4-1318 CONTINUED
CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 1000 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1318	W	632	KIDNEYS					
			UTERUS	MASS	C	INFILTRATION OF LEUCOCYTES (BILATERAL) CALCIFICATION (UNILATERAL) CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL)	+	
			VAGINA	MASS	A	ENDOMETRIAL STROMAL SARCOMA, PRIMARY	+	
			PITUITARY GLAND			ENDOMETRIAL STROMAL SARCOMA, METASTASIS	+	
			THYROID GLANDS			HYPERPLASIA OF CHROMOPHOBE CELLS	+	
			ADRENAL GLANDS			C-CELL ADENOMA (UNILATERAL)	+	
						VACUOLAR DEGENERATION OF CORTICAL CELLS (UNILATERAL) EXTRAMEDULLARY HEMATOPOIESIS (UNILATERAL) HYPERPLASIA OF GLOMERULOSA CELLS (BILATERAL)	+	
			HARDERIAN GLANDS			INFILTRATION OF LEUCOCYTES (UNILATERAL) HYPERSECRETION (UNILATERAL)	+	
			BRAIN			PIGMENTATION	+	
			SPINAL CORD			PIGMENTATION	+	

1) FATE : W , KILLED IN EXTREMIS 2) GRADE : NEGATIVE NOT PRESENTED 3) GRADE OF MASS :
+ , SLIGHT A , SMALL AND/OR SINGULAR
++ , MODERATE B , MEDIAL AND/OR SPORADIC
+++ , SEVERE C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F4-1319
CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 1000 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1319	W	735	MULTIPLE ORGANS	DISCOLORATION	+++	MYELOCYTIC LEUKEMIA		MYELOCYTIC LEUKEMIA
			HEART			FIBROSIS	+	: MULTIPLE ORGANS
			THYMUS			HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	++	ADENOMA: PITUITARY GLAND
			LYMPH NODES (PULM. HILUS)			BLOOD ABSORPTION	+	
			SPLEEN	ROUGHNESS OF SURFACE ATROPHY	+	HEMOSIDEROSIS ATROPHY	++ +++	
			NASAL CAVITY			INFILTRATION OF LEUCOCYTES	+	
			LARYNGOPHARYNX			INFILTRATION OF LEUCOCYTES	+	
			LUNG			CALCIFICATION OF VASCULAR WALL	+	
			LIVER	ROUGHNESS OF SURFACE ATROPHY YELLOWISH CHANGE	++ + +	FATTY DEGENERATION OF HEPATIC CELLS CHOLANGIOFIBROSIS FOCAL ATROPHY OF HEPATIC CELLS MACROPHAGE MIGRATION IN PERIVASCULAR AREA INFILTRATION OF LEUCOCYTES EXTRAMEDULLARY HEMATOPOIESIS	++ + + + + +	
			PANCREAS			ENLARGEMENT OF LANGERHANS' ISLAND ATROPHY OF PANCREATIC ACINUS	+ ++	
			KIDNEYS			PIGMENTATION (BILATERAL)	++	

1) FATE : W , KILLED IN EXTREMIS

2) GRADE : NEGATIVE NOT PRESENTED

3) GRADE OF MASS :

A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

+ , SLIGHT
++ , MODERATE
+++ , SEVERE

APPENDIX 11-F4-1319 CONTINUED

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 1000 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1319	W	735	KIDNEYS			CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) INFILTRATION OF LEUCOCYTES (BILATERAL) CALCIFICATION (BILATERAL)	+	
			UTERUS			PIGMENTATION	+	
			PITUITARY GLAND	ENLARGEMENT HEMORRHAGE	++ +	ADENOMA		
			THYROID GLANDS			HYPERPLASIA OF C-CELLS (UNILATERAL)	+	
			BRAIN			PIGMENTATION	+	

1) FATE : W , KILLED IN EXTREMIS

2) GRADE : NEGATIVE NOT PRESENTED

+ , SLIGHT

++ , MODERATE

+++ , SEVERE

3) GRADE OF MASS :

A , SMALL AND/OR SINGULAR

B , MEDIAL AND/OR SPORADIC

C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F4-1320

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 1000 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1320	Y	741	HEART			INFILTRATION OF LEUCOCYTES	+	NO SIGNIFICANT LESION
			THYMUS			HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	+	
			LYMPH NODES (PULM.HILUS) SPLEEN			BLOOD ABSORPTION	+	
						HEMOSIDEROSIS	++	
						EXTRAMEDULLARY HEMATOPOIESIS	++	
			NASAL CAVITY			INFLAMMATION	++	
			LARYNGOPHARYNX			INFILTRATION OF LEUCOCYTES	+	
			LIVER	NODULE	+	INFILTRATION OF LEUCOCYTES HYPERPLASTIC NODULE SMALL GRANULOMA MACROPHAGE MIGRATION IN PERIVASCULAR AREA CHOLANGIOFIBROSIS	++ ++ ++ +	
			PANCREAS			INFILTRATION OF LEUCOCYTES	+	
			KIDNEYS			INFILTRATION OF LEUCOCYTES (UNILATERAL) PIGMENTATION (BILATERAL) CALCIFICATION (UNILATERAL) CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL)	++ ++ ++ +	
			OVARIES			INFILTRATION OF LEUCOCYTES	+	
1) FATE : Y , KILLED ON SCHEDULE				2) GRADE : NEGATIVE NOT PRESENTED		3) GRADE OF MASS :		
				+	SLIGHT	A , SMALL AND/OR SINGULAR		
				++	MODERATE	B , MEDIAL AND/OR SPORADIC		
				+++	SEVERE	C , LARGE AND/OR MULTIPLE		
4) DAYS : AFTER START OF TREATMENT								

APPENDIX 11-F4-1320 CONTINUED
 CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
 OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 1000 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1320	Y	741	OVARIES			(BILATERAL)		
			UTERUS			PIGMENTATION DILATATION OF DUCT	+	
			PITUITARY GLAND			HYPERPLASIA OF CHROMOPHOBIC CELLS	+++	
			SKIN			INFILTRATION OF LEUCOCYTES	+	
			BRAIN			PIGMENTATION	+	
			SPINAL CORD			PIGMENTATION	+	

1) FATE : Y , KILLED ON SCHEDULE
 2) GRADE : NEGATIVE NOT PRESENTED
 3) GRADE OF MASS :
 A , SMALL AND/OR SINGULAR
 B , MEDIAL AND/OR SPORADIC
 C , LARGE AND/OR MULTIPLE
 4) DAYS : AFTER START OF TREATMENT
 + , SLIGHT
 ++ , MODERATE
 +++ , SEVERE

APPENDIX 11-F4-1321

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 1000 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1321	Y	741	HEART			FIBROSIS	+	ADENOCARCINOMA: CLITORAL GLAND
			THYMUS			HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	+	
			SPLEEN			HEMOSIDEROSIS EXTRAMEDULLARY HEMATOPOIESIS	++ ++	
			BONE MARROW			PROLIFERATION OF RETICULAR CELLS	+	
			NASAL CAVITY			INFILTRATION OF LEUCOCYTES	+	
			LUNG			OSSEOUS TISSUE	+	
			LIVER			SMALL GRANULOMA FOCAL ATROPHY OF HEPATIC CELLS MACROPHAGE MIGRATION IN PERIVASCULAR AREA	++ ++ +	
			KIDNEYS			CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) INFILTRATION OF LEUCOCYTES (BILATERAL) CALCIFICATION (UNILATERAL) PIGMENTATION (BILATERAL)	++ ++ ++ ++	
			OVARIES			INFILTRATION OF LEUCOCYTES (BILATERAL)	+	
			UTERUS			PIGMENTATION	+	

1) FATE : Y , KILLED ON SCHEDULE 2) GRADE : NEGATIVE NOT PRESENTED 3) GRADE OF MASS :
+ , SLIGHT A , SMALL AND/OR SINGULAR
++ , MODERATE B , MEDIAL AND/OR SPORADIC
+++ , SEVERE C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F4-1321 CONTINUED

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 1000 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1321	Y	741	VAGINA			INFILTRATION OF LEUCOCYTES	+	
			CLITORAL GLAND	NODULE	+	ADENOCARCINOMA		
			ADRENAL GLANDS			VACUOLAR DEGENERATION OF CORTICAL CELLS (UNILATERAL)	+	
			BRAIN			PIGMENTATION	+	
			SPINAL CORD			PIGMENTATION	+	

1) FATE : Y , KILLED ON SCHEDULE 2) GRADE : NEGATIVE NOT PRESENTED 3) GRADE OF MASS :

4) DAYS : AFTER START OF TREATMENT

+, SLIGHT
++, MODERATE
+++, SEVERE

A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE

APPENDIX 11-F4-1322 CONTINUED

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 1000 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1322	Y	741	LIVER			FOCAL ATROPHY OF HEPATIC CELLS	+	
			KIDNEYS			INFILTRATION OF LEUCOCYTES (UNILATERAL)	+	
						CALCIFICATION (BILATERAL)	+	
						CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL)	++	
						PIGMENTATION (BILATERAL)	+	
			OVARIES			INFILTRATION OF LEUCOCYTES (UNILATERAL)	+	
			UTERUS			INFILTRATION OF LEUCOCYTES PIGMENTATION	+	
			VAGINA			INFILTRATION OF LEUCOCYTES	+	
			PITUITARY GLAND	ENLARGEMENT	+	ADENOMA		
			THYROID GLANDS	ENLARGEMENT (UNILATERAL)	+	HYPERPLASIA OF C-CELLS (BILATERAL)	+	
			ADRENAL GLANDS			VACUOLAR DEGENERATION OF CORTICAL CELLS (UNILATERAL)	++	
						EXTRAMEDULLARY HEMATOPOIESIS (UNILATERAL)	+	
			SKIN (SUBCUTIS)	MASS	B	FIBROMA		
			HARDERIAN GLANDS			INFILTRATION OF LEUCOCYTES	+	
			1) FATE : Y , KILLED ON SCHEDULE	2) GRADE : NEGATIVE NOT PRESENTED		3) GRADE OF MASS :		
				+	SLIGHT	A , SMALL AND/OR SINGULAR		
				++	MODERATE	B , MEDIAL AND/OR SPORADIC		
			4) DAYS : AFTER START OF TREATMENT	+++	SEVERE	C , LARGE AND/OR MULTIPLE		

APPENDIX 11-F4-1322 CONTINUED
CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 1000 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1322	Y	741	HARDERIAN GLANDS			(BILATERAL)		
			BRAIN			PIGMENTATION	+	
			SPINAL CORD			PIGMENTATION	+	

1) FATE : Y / KILLED ON SCHEDULE
2) GRADE : NEGATIVE NOT PRESENTED
3) GRADE OF MASS :
A / SMALL AND/OR SINGULAR
B / MEDIAL AND/OR SPORADIC
C / LARGE AND/OR MULTIPLE
4) DAYS : AFTER START OF TREATMENT
+ / SLIGHT
++ / MODERATE
+++ / SEVERE

APPENDIX 11-F4-1323
CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 1000 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1323	Y	741	THYMUS			HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	+	NO SIGNIFICANT LESION
			LYMPH NODES (PULM. HILUS) SPLEEN			BLOOD ABSORPTION	+	
						HEMOSIDEROSIS	++	
						EXTRAMEDULLARY HEMATOPOIESIS	++	
			NASAL CAVITY			INFILTRATION OF LEUCOCYTES	+	
			LUNG			OSSEOUS TISSUE	+	
						CALCIFICATION OF VASCULAR WALL	+	
			LIVER	NODULE	+	FOCAL ATROPHY OF HEPATIC CELLS SMALL GRANULOMA PROLIFERATION OF BILE DUCT FATTY DEGENERATION OF HEPATIC CELLS	+	
			KIDNEYS			INFILTRATION OF LEUCOCYTES (BILATERAL)	+	
						PIGMENTATION (BILATERAL)	+	
						CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL)	+	
						CALCIFICATION (UNILATERAL)	+	
			UTERUS			PIGMENTATION	+	
			EYE BALLS	GRAYISH CHANGE (UNILATERAL)	+	RETINAL ATROPHY (UNILATERAL)	++	

1) FATE : Y / KILLED ON SCHEDULE 2) GRADE : NEGATIVE NOT PRESENTED 3) GRADE OF MASS :
+ / SLIGHT A / SMALL AND/OR SINGULAR
++ / MODERATE B / MEDIAL AND/OR SPORADIC
+++ / SEVERE C / LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F4-1323 CONTINUED
CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 1000 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1323	Y	741	EYE BALLS				++	
			BRAIN				+	
			SPINAL CORD				+	
						CATARACT (UNILATERAL) HEMOSIDEROSIS (UNILATERAL)		
						PIGMENTATION	+	
						PIGMENTATION	+	

1) FATE : Y , KILLED ON SCHEDULE	2) GRADE : NEGATIVE NOT PRESENTED + , SLIGHT ++ , MODERATE +++ , SEVERE	3) GRADE OF MASS : A , SMALL AND/OR SINGULAR B , MEDIAL AND/OR SPORADIC C , LARGE AND/OR MULTIPLE
4) DAYS : AFTER START OF TREATMENT		

APPENDIX 11-F4-1324

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 1000 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1324	Y	741	MULTIPLE ORGANS			MONONUCLEAR CELL LEUKEMIA		ADENOMA: PITUITARY GLAND MONONUCLEAR CELL LEUKEMIA : MULTIPLE ORGANS
			HEART			FIBROSIS	+	
			THYMUS			HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	+	
			LYMPH NODES (PULM. HILUS)			BLOOD ABSORPTION	+	
			SPLEEN	ENLARGEMENT	++	HEMOSIDEROSIS	+	
			NASAL CAVITY			INFILTRATION OF LEUCOCYTES	+	
			TRACHEA			INFILTRATION OF LEUCOCYTES	+	
			LUNG			HISTIOCYTOSIS CALCIFICATION OF VASCULAR WALL	+	
			LIVER			SMALL GRANULOMA MACROPHAGE MIGRATION IN PERIVASCULAR AREA FOCAL ATROPHY OF HEPATIC CELLS PROLIFERATION OF BILE DUCT	++ ++ + +	
			KIDNEYS			PIGMENTATION (BILATERAL) URINE CAST (BILATERAL) CALCIFICATION (BILATERAL) REGENERATIVE RENAL TUBULE (BILATERAL)	++ + + +	
			UTERUS			PIGMENTATION	+	

1) FATE : Y , KILLED ON SCHEDULE 2) GRADE : NEGATIVE NOT PRESENTED 3) GRADE OF MASS :
 + , SLIGHT A , SMALL AND/OR SINGULAR
 ++ , MODERATE B , MEDIAL AND/OR SPORADIC
 +++ , SEVERE C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F4-1325
CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 1000 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) W	683	HEART	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1325								FIBROSIS	+	ADENOMA: MAMMARY GLAND
								HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	+	RHABDOMYOSARCOMA : MUSCLE (Q. FEMORIS)
								LYMPH NODES (ILIAC)	+	
						ENLARGEMENT	++	RHABDOMYOSARCOMA, METASTASIS	+++	
						ENLARGEMENT	++	EXTRAMEDULLARY HEMATOPOIESIS	+	
								INFILTRATION OF LEUCOCYTES	+	
								INFILTRATION OF LEUCOCYTES	+	
								RHABDOMYOSARCOMA, METASTASIS	+	
						NODULE	++	EXTRAMEDULLARY HEMATOPOIESIS GRANULAR DEGENERATION	+	
						YELLOWISH CHANGE	+	ATROPHY OF PANCREATIC ACINUS	++	
								PIGMENTATION (BILATERAL)	+	
								URINE CAST (BILATERAL)	+	
								CALCIFICATION (BILATERAL)	+	
								HYPERPLASIA OF RENAL TUBULES (BILATERAL)	++	
								PIGMENTATION	+	
								HYPERPLASIA OF CHROMOPHOBIC CELLS	+	
								HYPERPLASIA OF C-CELLS (BILATERAL)	+	

1) FATE : W , KILLED IN EXTREMIS 2) GRADE : NEGATIVE NOT PRESENTED 3) GRADE OF MASS :
+ , SLIGHT A , SMALL AND/OR SINGULAR
++ , MODERATE B , MEDIAL AND/OR SPORADIC
+++ , SEVERE C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F4-1325 CONTINUED

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 1000 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1325	W	683	ADRENAL GLANDS	ENLARGEMENT (UNILATERAL)	+			
						HYPERPLASIA OF GLOMERULOSA CELLS (BILATERAL)	++	
						VACUOLAR DEGENERATION OF CORTICAL CELLS (BILATERAL)	++	
						EXTRAMEDULLARY HEMATOPOIESIS (BILATERAL)	+	
			MUSCLE (Q. FEMORIS)	MASS	C	RHABDOMYOSARCOMA, PRIMARY		
			MAMMARY GLAND	MASS	C	ADENOMA HYPERPLASIA	++	
			EYE BALLS			CALCIFICATION, SCLERA (BILATERAL)	+	
			SPINAL CORD			PIGMENTATION	+	

1) FATE : W , KILLED IN EXTREMIS

2) GRADE : NEGATIVE NOT PRESENTED

+ , SLIGHT
++ , MODERATE
+++ , SEVERE

3) GRADE OF MASS :

A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F4-1326

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 1000 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1326	Y	741	MULTIPLE ORGANS			MONONUCLEAR CELL LEUKEMIA		ADENOCARCINOMA: CLITORAL GLAND
			HEART			FIBROSIS	+	ADENOMA: PITUITARY GLAND
			THYMUS			HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	+	MONONUCLEAR CELL LEUKEMIA
			LYMPH NODES (PULM.HILUS)			BLOOD ABSORPTION	+	: MULTIPLE ORGANS
			SPLEEN	ENLARGEMENT	+++	EXTRAMEDULLARY HEMATOPOIESIS	+	
			BONE MARROW			ACTIVATION OF HEMATOPOIESIS	++	
			NASAL CAVITY			INFILTRATION OF LEUCOCYTES	+	
			LARYNGOPHARYNX			INFILTRATION OF LEUCOCYTES	+	
			LUNG			CALCIFICATION OF VASCULAR WALL OSSEOUS TISSUE	+	
			STOMACH			DILATATION OF GASTRIC FAVEOLAE	+	
			LIVER	ROUGHNESS OF SURFACE	+++	FATTY DEGENERATION OF HEPATIC CELLS EXTRAMEDULLARY HEMATOPOIESIS SMALL GRANULOMA FOCAL NECROSIS MACROPHAGE MIGRATION IN PERIVASCULAR AREA	+	
			PANCREAS			ATROPHY OF PANCREATIC ACINUS	+	

1) FATE : Y , KILLED ON SCHEDULE

2) GRADE : NEGATIVE NOT PRESENTED

3) GRADE OF MASS :

A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

+ , SLIGHT
++ , MODERATE
+++ , SEVERE

APPENDIX 11-F4-1326 CONTINUED
CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 1000 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1326	Y	741	KIDNEYS			URINE CAST (BILATERAL) PIGMENTATION (BILATERAL) REGENERATIVE RENAL TUBULE (BILATERAL) INFILTRATION OF LEUCOCYTES (BILATERAL)	+	
			UTERUS			PIGMENTATION	+	
			CLITORAL GLAND	MASS	A	ADENOCARCINOMA		
			PITUITARY GLAND	ENLARGEMENT HEMORRHAGE	+	ADENOMA		
			THYROID GLANDS			HYPERPLASIA OF C-CELLS (UNILATERAL)	+	
			HARDERIAN GLANDS			INFILTRATION OF LEUCOCYTES (BILATERAL)	+	
			BRAIN			DILATATION OF CEREBRAL VENTRICLE	+	
			SPINAL CORD			PIGMENTATION	+	

1) FATE : Y / KILLED ON SCHEDULE 2) GRADE : NEGATIVE NOT PRESENTED 3) GRADE OF MASS :
+ , SLIGHT A , SMALL AND/OR SINGULAR
++ , MODERATE B , MEDIAL AND/OR SPORADIC
+++ , SEVERE C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F4-1327

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 1000 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1327	Y	741	HEART			FIBROSIS	++	ADENOCARCINOMA: CLITORAL GLAND
			THYMUS			HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	+	POLYP: UTERUS
			LYMPH NODES (PULM.HILUS) SPLEEN			BLOOD ABSORPTION	++	
						HEMOSIDEROSIS EXTRAMEDULLARY HEMATOPOIESIS	++ +	
			NASAL CAVITY			INFILTRATION OF LEUCOCYTES	+	
			TRACHEA			INFILTRATION OF LEUCOCYTES	+	
			LUNG			HISTIOCYTOSIS	+	
			PAROTID GLANDS			REGENERATIVE CHANGE (BILATERAL)	+	
			LIVER			SMALL GRANULOMA PROLIFERATION OF BILE DUCT FOCAL ATROPHY OF HEPATIC CELLS	++ ++ +	
			PANCREAS			INFILTRATION OF LEUCOCYTES ATROPHY OF PANCREATIC ACINUS	++ +	
			KIDNEYS			INFILTRATION OF LEUCOCYTES (BILATERAL)	+	

1) FATE : Y , KILLED ON SCHEDULE

2) GRADE : NEGATIVE NOT PRESENTED

+ , SLIGHT
++ , MODERATE
+++ , SEVERE

3) GRADE OF MASS :

A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F4-1327 CONTINUED
CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 1000 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1327	Y	741	KIDNEYS			CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) PIGMENTATION (BILATERAL) CALCIFICATION (BILATERAL)	+	
			OVARIES			CYST (UNILATERAL)	++	
			UTERUS	ENLARGEMENT	+	DILATATION OF DUCT POLYP	+	
			CLITORAL GLAND	MASS	B	ADENOCARCINOMA		
			THYROID GLANDS			HYPERPLASIA OF C-CELLS (UNILATERAL)	+	
			ADRENAL GLANDS			VACUOLAR DEGENERATION OF CORTICAL CELLS (UNILATERAL)	+	
			MAMMARY GLAND	MASS	B	DILATATION OF GLAND	+++	
			BRAIN			PIGMENTATION	+	
			SPINAL CORD			PIGMENTATION	+	

1) FATE : Y , KILLED ON SCHEDULE
2) GRADE : NEGATIVE NOT PRESENTED
3) GRADE OF MASS :
A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE
4) DAYS : AFTER START OF TREATMENT
+ , SLIGHT
++ , MODERATE
+++ , SEVERE

APPENDIX 11-F4-1328

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 1000 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2) 3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1328	W	736	HEART			FIBROSIS	++	ADENOMA: PITUITARY GLAND
			THYMUS			HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	+	FIBROADENOMA: MAMMARY GLAND
			SPLEEN			HEMOSIDEROSIS	++	
			NASAL CAVITY			INFLAMMATION	++	
			LUNG			CONGESTION	++	
			PAROTID GLANDS			INFILTRATION OF LEUCOCYTES (UNILATERAL)	+	
			LIVER			EXTRAMEDULLARY HEMATOPOIESIS FATTY DEGENERATION OF HEPATIC CELLS SMALL GRANULOMA INFILTRATION OF LEUCOCYTES FOCAL ATROPHY OF HEPATIC CELLS	+ ++ + + +	
			KIDNEYS			CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) PIGMENTATION (BILATERAL) INFILTRATION OF LEUCOCYTES (BILATERAL) CALCIFICATION (BILATERAL)	++ + + + +	
			OVARIES			INCREASE OF INTERSTITIAL CELLS (BILATERAL)	++	
			UTERUS			PIGMENTATION	+	

1) FATE : W , KILLED IN EXTREMIS

2) GRADE : NEGATIVE NOT PRESENTED

+ , SLIGHT

++ , MODERATE

+++ , SEVERE

3) GRADE OF MASS :

A , SMALL AND/OR SINGULAR

B , MEDIAL AND/OR SPORADIC

C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F4-1328 CONTINUED
CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 1000 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1328	W	736	VAGINA			ATROPHY	+	
			PITUITARY GLAND	MASS	A	ADENOMA		
			ADRENAL GLANDS	REDDISH CHANGE (UNILATERAL)	+	VACUOLAR DEGENERATION OF CORTICAL CELLS (UNILATERAL) ANGIECTASIA (UNILATERAL)	+++ ++	
			MAMMARY GLAND	MASS	C	FIBROADENOMA		
			BRAIN			HEMORRHAGE DILATATION OF CEREBRAL VENTRICLE PIGMENTATION MIGRATION OF HEMOSIDERIN-LADEN CELLS	+ + + +	
			SPINAL CORD			PIGMENTATION	+	

1) FATE : W , KILLED IN EXTREMIS
2) GRADE : NEGATIVE NOT PRESENTED
3) GRADE OF MASS :
A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE
4) DAYS : AFTER START OF TREATMENT
+ , SLIGHT
++ , MODERATE
+++ , SEVERE

APPENDIX 11-F4-1329

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 1000 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1329	X	718	HEART			FIBROSIS	++	FIBROADENOMA: MAMMARY GLAND
			SPLEEN			HEMOSIDEROSIS	++	HEMORRHAGE: BRAIN
			LUNG			CONGESTION	+++	
			LIVER			FATTY DEGENERATION OF HEPATIC CELLS	+	
			KIDNEYS			CALCIFICATION (BILATERAL) INFILTRATION OF LEUCOCYTES (UNILATERAL) CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL)	+	
			PITUITARY GLAND	ENLARGEMENT HEMORRHAGE	++ ++	HEMORRHAGE MIGRATION OF HEMOSIDERIN-LADEN CELLS	++ +	
			MAMMARY GLAND	MASS	C	FIBROADENOMA		
			BRAIN	IMPRESSION	+	HEMORRHAGE	++	

1) FATE : X / FOUND DEAD 2) GRADE : NEGATIVE NOT PRESENTED 3) GRADE OF MASS :
 ++ / SLIGHT
 +++ / MODERATE
 A / SMALL AND/OR SINGULAR
 B / MEDIAL AND/OR SPORADIC
 C / LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F4-1330

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 1000 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1330	Y	741	MULTIPLE ORGANS			MONONUCLEAR CELL LEUKEMIA		MONONUCLEAR CELL LEUKEMIA
			THYMUS			HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	+	: MULTIPLE ORGANS ADENOMA: PITUITARY GLAND
			SPLEEN	ENLARGEMENT	++	HEMOSIDEROSIS EXTRAMEDULLARY HEMATOPOIESIS	+	
			BONE MARROW			ACTIVATION OF HEMATOPOIESIS	+	
			NASAL CAVITY			INFILTRATION OF LEUCOCYTES	+	
			LARYNGOPHARYNX			INFILTRATION OF LEUCOCYTES	+	
			LUNG	HEMORRHAGE	++			
			LIVER			ANGIECTASIA FOCAL ATROPHY OF HEPATIC CELLS EXTRAMEDULLARY HEMATOPOIESIS FATTY DEGENERATION OF HEPATIC CELLS	+	
			PANCREAS			INFILTRATION OF LEUCOCYTES	+	
			KIDNEYS			CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) CALCIFICATION (BILATERAL) PIGMENTATION (BILATERAL) INFILTRATION OF LEUCOCYTES (BILATERAL)	+	

1) FATE : Y , KILLED ON SCHEDULE	2) GRADE : NEGATIVE NOT PRESENTED + , SLIGHT ++ , MODERATE +++ , SEVERE	3) GRADE OF MASS : A , SMALL AND/OR SINGULAR B , MEDIAL AND/OR SPORADIC C , LARGE AND/OR MULTIPLE
4) DAYS : AFTER START OF TREATMENT		

APPENDIX 11-F4-1330 CONTINUED

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 1000 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1330	Y	741	OVARIES	(BILATERAL)				
			UTERUS			PIGMENTATION	+	
			VAGINA			INFILTRATION OF LEUCOCYTES	+	
			PITUITARY GLAND			ADENOMA		
			HARDERIAN GLANDS			INFILTRATION OF LEUCOCYTES (BILATERAL)	+	
			BRAIN			PIGMENTATION	+	
			SPINAL CORD			PIGMENTATION	+	

1) FATE : Y , KILLED ON SCHEDULE 2) GRADE : NEGATIVE NOT PRESENTED 3) GRADE OF MASS :
+ , SLIGHT A , SMALL AND/OR SINGULAR
++ , MODERATE B , MEDIAL AND/OR SPORADIC
+++ , SEVERE C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F4-1331

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 1000 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1331	Y	741	HEART			FIBROSIS	+	ADENOMA: PITUITARY GLAND
			THYMUS			HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	+	
			LYMPH NODES (PULM. HILUS)			BLOOD ABSORPTION	+	
			LYMPH NODES (MESENT.)			ANGIECTASIA	+	
			SPLEEN			HEMOSIDEROSIS EXTRAMEDULLARY HEMATOPOIESIS	++ ++	
			NASAL CAVITY			INFILTRATION OF LEUCOCYTES	+	
			LARYNGOPHARYNX			INFLAMMATION	++	
			LUNG			INFILTRATION OF LEUCOCYTES	+	
			PAROTID GLANDS			INFILTRATION OF LEUCOCYTES (UNILATERAL) REGENERATIVE CHANGE (UNILATERAL)	+	
			LIVER			SMALL GRANULOMA FATTY DEGENERATION OF HEPATIC CELLS MACROPHAGE MIGRATION IN PERIVASCULAR AREA FOCAL ATROPHY OF HEPATIC CELLS	++ + + +	

1) FATE : Y / KILLED ON SCHEDULE . 2) GRADE : NEGATIVE NOT PRESENTED 3) GRADE OF MASS :
 + / SLIGHT A , SMALL AND/OR SINGULAR
 ++ / MODERATE B , MEDIAL AND/OR SPORADIC
 +++ / SEVERE C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F4-1331 CONTINUED
CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 1000 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1331	Y	741	LIVER					
			PANCREAS			PROLIFERATION OF BILE DUCT	+	
			KIDNEYS			ATROPHY OF PANCREATIC ACINUS	++	
						CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) CALCIFICATION (BILATERAL)	++	
			OVARIES			INCREASE OF INTERSTITIAL CELLS (BILATERAL)	+	
			UTERUS			PIGMENTATION INFILTRATION OF LEUCOCYTES	+	
			PITUITARY GLAND	ENLARGEMENT HEMORRHAGE	+++ ++	ADENOMA	+	
			THYROID GLANDS			HYPERPLASIA OF C-CELLS (UNILATERAL)	+	
			ADRENAL GLANDS			VACUOLAR DEGENERATION OF CORTICAL CELLS (UNILATERAL)	+	
			MAMMARY GLAND			HYPERPLASIA	+	
			HARDERIAN GLANDS			INFILTRATION OF LEUCOCYTES (BILATERAL)	+	
			BRAIN	IMPRESSION	+	DILATATION OF CEREBRAL VENTRICLE	++	

1) FATE : Y , KILLED ON SCHEDULE

2) GRADE : NEGATIVE NOT PRESENTED

3) GRADE OF MASS :

A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

+, SLIGHT
++, MODERATE
+++, SEVERE

APPENDIX 11-F4-1331 CONTINUED
CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 1000 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1331	Y	741	BRAIN			PIGMENTATION	+	
			SPINAL CORD			PIGMENTATION	+	

1) FATE : Y , KILLED ON SCHEDULE
2) GRADE : NEGATIVE NOT PRESENTED
+ , SLIGHT
++ , MODERATE
+++ , SEVERE
3) GRADE OF MASS :
A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE
4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F4-1332

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 1000 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1332	Y	741	HEART			FIBROSIS	+	ISLET-CELL ADENOMA
			THYMUS			HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	+	: PANCREAS ADENOMA: PITUITARY GLAND
			LYMPH NODES (PULM. HILUS) SPLEEN			BLOOD ABSORPTION	+	
						Hemosiderosis EXTRAMEDULLARY HEMATOPOIESIS	+++ +	
			NASAL CAVITY			INFILTRATION OF LEUCOCYTES	+	
			LUNG			CALCIFICATION OF VASCULAR WALL INFILTRATION OF LEUCOCYTES	++ +	
			PAROTID GLANDS			REGENERATIVE CHANGE (UNILATERAL)	+	
			LIVER			SMALL GRANULOMA FOCAL ATROPHY OF HEPATIC CELLS INFILTRATION OF LEUCOCYTES	++ ++ +	
			PANCREAS	NODULE	+	ISLET-CELL ADENOMA		
			KIDNEYS			INFILTRATION OF LEUCOCYTES (BILATERAL) CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL)	++ +	

1) FATE : Y , KILLED ON SCHEDULE

2) GRADE : NEGATIVE NOT PRESENTED

+ , SLIGHT
++ , MODERATE
+++ , SEVERE

3) GRADE OF MASS :

A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F4-1332 CONTINUED
CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 1000 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1332	Y	741	KIDNEYS					
			UTERUS					
			PITUITARY GLAND	HEMORRHAGE	+			
			MAMMARY GLAND					
			HARDERIAN GLANDS					
			BRAIN					
			SPINAL CORD					
						PIGMENTATION (BILATERAL) CALCIFICATION (UNILATERAL)	++ +	
						PIGMENTATION	+	
						ADENOMA		
						HYPERPLASIA	+	
						INFILTRATION OF LEUCOCYTES (UNILATERAL)	+	
						PIGMENTATION	+	
						PIGMENTATION	+	

1) FATE : Y / KILLED ON SCHEDULE 2) GRADE : NEGATIVE NOT PRESENTED 3) GRADE OF MASS :
+ , SLIGHT A , SMALL AND/OR SINGULAR
++ , MODERATE B , MEDIAL AND/OR SPORADIC
+++ , SEVERE C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F4-1333

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 1000 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1333	W	736	MULTIPLE ORGANS	DISCOLORATION	+			PHEOCHROMOCYTOMA: ADRENAL GLANDS
			PERITONEUM	MASS	C	SARCOMA		PAPILLARY ADENOMA: LUNG
			HEART			FIBROSIS	+	SARCOMA: PERITONEUM
			THYMUS			HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	+	
			LYMPH NODES (PULM.HILUS) SPLEEN			BLOOD ABSORPTION	+	
			BONE MARROW			HEMOSIDEROSIS EXTRAMEDULLARY HEMATOPOIESIS	+	
			NASAL CAVITY			ACTIVATION OF HEMATOPOIESIS	++	
			LUNG	CYST	+	INFILTRATION OF LEUCOCYTES	+	
			LIVER	DISCOLORATION	+	CALCIFICATION OF VASCULAR WALL PAPILLARY ADENOMA PHEOCHROMOCYTOMA, METASTASIS	+	
						EXTRAMEDULLARY HEMATOPOIESIS FATTY DEGENERATION OF HEPATIC CELLS SMALL GRANULOMA FOCAL NECROSIS	++ + +	
			PANCREAS			ATROPHY OF PANCREATIC ACINUS	+	
			KIDNEYS			PIGMENTATION (BILATERAL)	+	

1) FATE : W , KILLED IN EXTREMIS

2) GRADE : NEGATIVE NOT PRESENTED

3) GRADE OF MASS :

A , SMALL AND/OR SINGULAR

B , MEDIAL AND/OR SPORADIC

C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

+

SLIGHT

++ , MODERATE

+++ , SEVERE

APPENDIX 11-F4-1333 CONTINUED
CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 1000 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1333	W	736	KIDNEYS					
						INFILTRATION OF LEUCOCYTES (BILATERAL)	+	
						CALCIFICATION (BILATERAL)	+	
						REGENERATIVE RENAL TUBULE (BILATERAL)	+	
						URINE CAST (BILATERAL)	+	
			OVARIES			INCREASE OF INTERSTITIAL CELLS (UNILATERAL)	+	
			UTERUS					
						PIGMENTATION DILATATION OF DUCT	+	
			PITUITARY GLAND	HEMORRHAGE	+	HEMORRHAGE MIGRATION OF HEMOSIDERIN-LADEN CELLS HYPERTROPHIC CHANGE	+	
			ADRENAL GLANDS	MASS	A	PHEOCHROMOCYTOMA (UNILATERAL), PRIMARY	+	
			BRAIN			PIGMENTATION	+	
			SPINAL CORD			PIGMENTATION	+	

1) FATE : W / KILLED IN EXTREMIS

2) GRADE : NEGATIVE NOT PRESENTED
+ , SLIGHT
++ , MODERATE
+++ , SEVERE

3) GRADE OF MASS :

A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F4-1334

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 1000 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1334	Y	742	THYMUS			HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	++	NO SIGNIFICANT LESION
			SPLEEN			HEMOSIDEROSIS EXTRAMEDULLARY HEMATOPOIESIS	++ +	
			BONE MARROW			PROLIFERATION OF RETICULAR CELLS	+	
			NASAL CAVITY			INFILTRATION OF LEUCOCYTES	++	
			LARYNGOPHARYNX			INFILTRATION OF LEUCOCYTES HYPERSECRETION	++ +	
			TRACHEA			INFILTRATION OF LEUCOCYTES	+	
			LUNG			INFILTRATION OF LEUCOCYTES HISTIOCYTOSIS CALCIFICATION OF VASCULAR WALL EMPHYSEMA	++ + + +	
			LIVER			SMALL GRANULOMA FOCAL ATROPHY OF HEPATIC CELLS PROLIFERATION OF BILE DUCT FATTY DEGENERATION OF HEPATIC CELLS MACROPHAGE MIGRATION IN PERIVASCULAR AREA INFILTRATION OF LEUCOCYTES	++ + + + + +	
			PANCREAS			INFILTRATION OF LEUCOCYTES	+	
			KIDNEYS			CHRONIC PROGRESSIVE	+	
1) FATE : Y , KILLED ON SCHEDULE				2) GRADE : NEGATIVE NOT PRESENTED		3) GRADE OF MASS :		
4) DAYS : AFTER START OF TREATMENT				+	SLIGHT	A , SMALL AND/OR SINGULAR		
				++	MODERATE	B , MEDIAL AND/OR SPORADIC		
				+++	SEVERE	C , LARGE AND/OR MULTIPLE		

APPENDIX 11-F4-1334 CONTINUED
CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 1000 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1334	Y	742	KIDNEYS			GLOMERULONEPHROPATHY (BILATERAL) PIGMENTATION (BILATERAL) INFILTRATION OF LEUCOCYTES (UNILATERAL) CALCIFICATION (BILATERAL)	+ + + +	
			UTERUS			INFILTRATION OF LEUCOCYTES PIGMENTATION	+ ++	
			VAGINA			INFILTRATION OF LEUCOCYTES	+	
			THYROID GLANDS			HYPERPLASIA OF C-CELLS (BILATERAL) HYPERPLASIA OF FOLLICULAR EPITHELIAL CELLS (UNILATERAL)	+ +	
			PARATHYROID GLANDS			INFILTRATION OF LEUCOCYTES (UNILATERAL)	+	
			ADRENAL GLANDS			ANGIECTASIA (BILATERAL) INFILTRATION OF LEUCOCYTES (UNILATERAL)	+ +	
			EYE BALLS	HEMORRHAGE (UNILATERAL)	+++	CATARACT (UNILATERAL) RETINAL ATROPHY (UNILATERAL)	+++ +++	
			HARDERIAN GLANDS			INFILTRATION OF LEUCOCYTES (UNILATERAL)	+	
			BRAIN			PIGMENTATION	+	
			SPINAL CORD			PIGMENTATION	+	

1) FATE : Y , KILLED ON SCHEDULE 2) GRADE : NEGATIVE NOT PRESENTED 3) GRADE OF MASS :
+ , SLIGHT A , SMALL AND/OR SINGULAR
++ , MODERATE B , MEDIAL AND/OR SPORADIC
+++ , SEVERE C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F4-1335

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 1000 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1335	W	728	HEART			FIBROSIS	+	ADENOMA: PITUITARY GLAND
			THYMUS			HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	+	ISLET-CELL ADENOMA : PANCREAS
			SPLEEN			HEMOSIDEROSIS EXTRAMEDULLARY HEMATOPOIESIS	+++ +	
			BONE MARROW			MIGRATION OF HEMOSIDERIN-LADEN CELLS	+	
			NASAL CAVITY			INFILTRATION OF LEUCOCYTES CALCIFICATION	++ +	
			LARYNGOPHARYNX			INFILTRATION OF LEUCOCYTES	+	
			TRACHEA			INFILTRATION OF LEUCOCYTES	+	
			LUNG			CALCIFICATION OF VASCULAR WALL	+	
			LIVER			SMALL GRANULOMA FOCAL ATROPHY OF HEPATIC CELLS MACROPHAGE MIGRATION IN PERIVASCULAR AREA FATTY DEGENERATION OF HEPATIC CELLS	++ + + +	
			PANCREAS			ISLET-CELL ADENOMA HEMORRHAGE	++	
			KIDNEYS			CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL)	+	

1) FATE : W , KILLED IN EXTREMIS

2) GRADE : NEGATIVE NOT PRESENTED

3) GRADE OF MASS :

A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F4-1335 CONTINUED
CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 1000 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1335	W	728	KIDNEYS					
			OVARIES					
			UTERUS					
			PITUITARY GLAND	MASS HEMORRHAGE	A ++			
			MAMMARY GLAND					
			HARDERIAN GLANDS					
			BRAIN	IMPRESSION	+++			
			SPINAL CORD					

1) FATE : W , KILLED IN EXTREMIS 2) GRADE : NEGATIVE NOT PRESENTED 3) GRADE OF MASS :
+ , SLIGHT A , SMALL AND/OR SINGULAR
++ , MODERATE B , MEDIAL AND/OR SPORADIC
+++ , SEVERE C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F4-1336

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 1000 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1336	Y	742	HEART			FIBROSIS	+	ADENOMA: PITUITARY GLAND
			THYMUS			HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	+	C-CELL ADENOMA: THYROID GLANDS
			LYMPH NODES (PULM.HILUS) SPLEEN			BLOOD ABSORPTION	+	POLYP: UTERUS
						HEMOSIDEROSIS	++	
						EXTRAMEDULLARY HEMATOPOIESIS	+	
			NASAL CAVITY			INFILTRATION OF LEUCOCYTES	++	
			LARYNGOPHARYNX			INFILTRATION OF LEUCOCYTES	+	
			PAROTID GLANDS			REGENERATIVE CHANGE (UNILATERAL)	+	
			LIVER			NODULE	+	
						CHOLANGIOFIBROSIS	+	
						FOCAL NECROSIS	+	
						FOCAL ATROPHY OF HEPATIC CELLS	+	
						HYPERPLASTIC NODULE	+	
						SMALL GRANULOMA	+	
						FATTY DEGENERATION OF HEPATIC CELLS	+	
			KIDNEYS			CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL)	+	
						INFILTRATION OF LEUCOCYTES (BILATERAL)	+	

1) FATE : Y , KILLED ON SCHEDULE

2) GRADE : NEGATIVE NOT PRESENTED

+ , SLIGHT

++ , MODERATE

+++ , SEVERE

3) GRADE OF MASS :

A , SMALL AND/OR SINGULAR

B , MEDIAL AND/OR SPORADIC

C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F4-1336 CONTINUED
CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 1000 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1336	Y	742	KIDNEYS					
			UTERUS					
			PITUITARY GLAND	ENLARGEMENT HEMORRHAGE	+			CALCIFICATION (BILATERAL) + PIGMENTATION (BILATERAL) +
			THYROID GLANDS		+			POLYP + PIGMENTATION +
			ADRENAL GLANDS					ADENOMA +
			MAMMARY GLAND					C-CELL ADENOMA (UNILATERAL) +
			EYE BALLS					VACUOLAR DEGENERATION OF CORTICAL CELLS (UNILATERAL) +
			HARDERIAN GLANDS					INFILTRATION OF LEUCOCYTES +
			BRAIN					CALCIFICATION, SCLERA (UNILATERAL) +
			SPINAL CORD					GRANULATION (UNILATERAL) +
								PIGMENTATION +
								PIGMENTATION +

1) FATE : Y , KILLED ON SCHEDULE

2) GRADE : NEGATIVE NOT PRESENTED
+ , SLIGHT
++ , MODERATE
+++ , SEVERE

3) GRADE OF MASS :

A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F4-1337

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 1000 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1337	W	694	HEART			FIBROSIS	+	POLYP: UTERUS
			THYMUS			HYPERPLASIA OF EPITHELIAL RETICULUM CELLS	+	ADENOMA: PITUITARY GLAND
			SPLEEN			HEMOSIDEROSIS	++	
			NASAL CAVITY			INFILTRATION OF LEUCOCYTES	+	
			LARYNGOPHARYNX			INFILTRATION OF LEUCOCYTES	++	
			LUNG			HISTIOCYTOSIS INFILTRATION OF LEUCOCYTES	+	
			PAROTID GLANDS			INFILTRATION OF LEUCOCYTES (BILATERAL)	+	
			LIVER			SMALL GRANULOMA FATTY DEGENERATION OF HEPATIC CELLS FOCAL ATROPHY OF HEPATIC CELLS INFILTRATION OF LEUCOCYTES FOCAL NECROSIS	++ + + + +	
			KIDNEYS			CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) PIGMENTATION (BILATERAL) CALCIFICATION (BILATERAL) INFILTRATION OF LEUCOCYTES (BILATERAL)	+ + + +	
			UTERUS	NODULE	+	INFILTRATION OF LEUCOCYTES	+	

1) FATE : W , KILLED IN EXTREMIS				2) GRADE :	NEGATIVE NOT PRESENTED		3) GRADE OF MASS :	
					+ , SLIGHT		A , SMALL AND/OR SINGULAR	
					++ , MODERATE		B , MEDIAL AND/OR SPORADIC	
4) DAYS : AFTER START OF TREATMENT					+++ , SEVERE		C , LARGE AND/OR MULTIPLE	

APPENDIX 11-F4-1337 CONTINUED
CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 1000 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1337	W	694	UTERUS					
			VAGINA					
			PITUITARY GLAND	ENLARGEMENT HEMORRHAGE	+++ ++			POLYP HYPERPLASIA OF ENDOMETRIAL EPITHELIUM ++
			ADRENAL GLANDS					INFILTRATION OF LEUCOCYTES +
			MAMMARY GLAND					ADENOMA ++
			EYE BALLS	GRAYISH CHANGE (UNILATERAL)	+			ANGIECTASIA (UNILATERAL) ++
			HARDERIAN GLANDS					HYPERPLASIA +++
			BRAIN	IMPRESSION ADHESION	+			RETINAL ATROPHY (UNILATERAL) ++
			SPINAL CORD					INFILTRATION OF LEUCOCYTES (BILATERAL) +
								HEMORRHAGE ++
								DILATATION OF CEREBRAL VENTRICLE ++
								PIGMENTATION +
								PIGMENTATION +

1) FATE : W , KILLED IN EXTREMIS

2) GRADE : NEGATIVE NOT PRESENTED

3) GRADE OF MASS :

A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

+, SLIGHT
++, MODERATE
+++, SEVERE

APPENDIX 11-F4-1338

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 1000 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1338	Y	742	MULTIPLE ORGANS			MONONUCLEAR CELL LEUKEMIA		MONONUCLEAR CELL LEUKEMIA : MULTIPLE ORGANS ADENOMA: PITUITARY GLAND
			SPLEEN	ENLARGEMENT	+			
			LIVER			SMALL GRANULOMA FOCAL ATROPHY OF HEPATIC CELLS	++ ++	
			PANCREAS			ATROPHY OF PANCREATIC ACINUS	+	
			KIDNEYS			PIGMENTATION (BILATERAL) CALCIFICATION (UNILATERAL)	++ +	
			PITUITARY GLAND	ENLARGEMENT HEMORRHAGE	++ ++	ADENOMA CONGESTION	++	
			ADRENAL GLANDS			CONGESTION (UNILATERAL)	+	
			HARDERIAN GLANDS			INFILTRATION OF LEUCOCYTES (UNILATERAL)	+	

1) FATE : Y , KILLED ON SCHEDULE 2) GRADE : NEGATIVE NOT PRESENTED 3) GRADE OF MASS :
 + , SLIGHT A , SMALL AND/OR SINGULAR
 ++ , MODERATE B , MEDIAL AND/OR SPORADIC
 +++ , SEVERE C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F4-1339

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 1000 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1339	Y	742	LYMPH NODES (SUBMAXI.) SPLEEN			INCREASE OF PLASMA CELLS	+	PHEOCHROMOCYTOMA: ADRENAL GLANDS
			LIVER			HEMOSIDEROSIS ATROPHY	++	POLYP: VAGINA
						HYPERPLASTIC NODULE SMALL GRANULOMA FOCAL ATROPHY OF HEPATIC CELLS	+	ADENOMA: PITUITARY GLAND
			KIDNEYS			CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) PIGMENTATION (BILATERAL) HYPERPLASIA OF MUCOSAL EPITHELIUM (BILATERAL) CALCIFICATION (UNILATERAL)	++	
			UTERUS			DILATATION OF DUCT	+	
			VAGINA			POLYP		
			PITUITARY GLAND	HEMORRHAGE	+	ADENOMA		
			THYROID GLANDS			HYPERPLASIA OF C-CELLS (BILATERAL)	+	
			ADRENAL GLANDS	ENLARGEMENT (UNILATERAL) REDDISH CHANGE (UNILATERAL)	+	PHEOCHROMOCYTOMA (UNILATERAL) CYST (UNILATERAL)	+++	
			EYE BALLS	GRAYISH CHANGE (UNILATERAL)	+++	CATARACT (UNILATERAL)	+++	

1) FATE : Y , KILLED ON SCHEDULE

2) GRADE : NEGATIVE NOT PRESENTED

+ , SLIGHT
++ , MODERATE
+++ , SEVERE

3) GRADE OF MASS :

A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F4-1339 CONTINUED
CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 1000 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1339	Y	742	EYE BALLS					
			BRAIN			RETINAL ATROPHY (UNILATERAL) PIGMENTATION	+++ +	

1) FATE : Y / KILLED ON SCHEDULE
2) GRADE : NEGATIVE NOT PRESENTED
3) GRADE OF MASS :
A / SMALL AND/OR SINGULAR
B / MEDIAL AND/OR SPORADIC
C / LARGE AND/OR MULTIPLE
4) DAYS : AFTER START OF TREATMENT
+ / SLIGHT
++ / MODERATE
+++ / SEVERE

APPENDIX 11-F4-1340

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 1000 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1340	Y	742	HEART			FIBROSIS	+	PHEOCHROMOCYTOMA: ADRENAL GLANDS
			SPLEEN			HEMOSIDEROSIS	++	
			LARYNGOPHARYNX			INFLAMMATION CYSTIC DILATATION OF GLAND CALCIFICATION OF VASCULAR WALL	+	
			LIVER			FOCAL ATROPHY OF HEPATIC CELLS SMALL GRANULOMA	+	
			KIDNEYS			PIGMENTATION (BILATERAL) CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL)	+	
			OVARIES			ATROPHY (BILATERAL)	+	
			PITUITARY GLAND	HEMORRHAGE	+	HEMORRHAGE MIGRATION OF HEMOSIDERIN-LADEN CELLS	++	
			ADRENAL GLANDS	ENLARGEMENT (UNILATERAL)	+	PHEOCHROMOCYTOMA (UNILATERAL)	+	

1) FATE : Y , KILLED ON SCHEDULE 2) GRADE : NEGATIVE NOT PRESENTED 3) GRADE OF MASS :
+ , SLIGHT A , SMALL AND/OR SINGULAR
++ , MODERATE B , MEDIAL AND/OR SPORADIC
+++ , SEVERE C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F4-1341

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 1000 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1341	Y	742	HEART			FIBROSIS	+	NO SIGNIFICANT LESION
			SPLEEN	ENLARGEMENT	+	CONGESTION HEMOSIDEROSIS EXTRAMEDULLARY HEMATOPOIESIS	++ ++ +	
			LARYNGOPHARYNX			INFLAMMATION CYSTIC DILATATION OF GLAND	+ +	
			LUNG			CALCIFICATION OF VASCULAR WALL	+	
			LIVER	ENLARGEMENT	+	SMALL GRANULOMA FOCAL ATROPHY OF HEPATIC CELLS INFILTRATION OF LEUCOCYTES	+ ++ +	
			KIDNEYS	ROUGHNESS OF SURFACE (BILATERAL)	+	CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) PIGMENTATION (BILATERAL) CALCIFICATION (UNILATERAL)	++ ++ +	
			PITUITARY GLAND	HEMORRHAGE	+			
			MAMMARY GLAND			DILATATION OF GLAND	+	

1) FATE : Y , KILLED ON SCHEDULE 2) GRADE : NEGATIVE NOT PRESENTED 3) GRADE OF MASS :
+ , SLIGHT A , SMALL AND/OR SINGULAR
++ , MODERATE B , MEDIAL AND/OR SPORADIC
+++ , SEVERE C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F4-1342

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 1000 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1342	X	658	MULTIPLE ORGANS			MONONUCLEAR CELL LEUKEMIA		MONONUCLEAR CELL LEUKEMIA : MULTIPLE ORGANS
			SPLEEN	ENLARGEMENT	++			
			LIVER	ROUGHNESS OF SURFACE	+			
			PANCREAS			ATROPHY OF PANCREATIC ACINUS	+	
			KIDNEYS			PIGMENTATION (BILATERAL)	+	
			PITUITARY GLAND	HEMORRHAGE	+			

1) FATE : X , FOUND DEAD

2) GRADE : NEGATIVE NOT PRESENTED

+ , SLIGHT
++ , MODERATE
+++ , SEVERE

3) GRADE OF MASS :

A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F4-1343

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 1000 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1343	Y	742	SPLEEN			HEMOSIDEROSIS	++	ADENOMA: PITUITARY GLAND
			NASAL CAVITY			INFLAMMATION	+	
			LIVER			FOCAL ATROPHY OF HEPATIC CELLS SMALL GRANULOMA	++ +	
			KIDNEYS			CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) PIGMENTATION (BILATERAL)	++ +	
			OVARIES			ATROPHY (BILATERAL)	++	
			PITUITARY GLAND	ENLARGEMENT HEMORRHAGE	+++ ++	ADENOMA		
			THYROID GLANDS			HYPERPLASIA OF C-CELLS (UNILATERAL)	+	
			BRAIN	IMPRESSION	+	PIGMENTATION	+	

1) FATE : Y , KILLED ON SCHEDULE

2) GRADE : NEGATIVE NOT PRESENTED

3) GRADE OF MASS :

A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

+ , SLIGHT
++ , MODERATE
+++ , SEVERE

APPENDIX 11-F4-1344

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 1000 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1344	W	718	MULTIPLE ORGANS			MONONUCLEAR CELL LEUKEMIA		ISLET-CELL ADENOMA : PANCREAS
			HEART			FIBROSIS	+	MONONUCLEAR CELL LEUKEMIA
			SPLEEN	ENLARGEMENT	+++			: MULTIPLE ORGANS
			NASAL CAVITY			INFLAMMATION	++	GRANULOSA-THECA CELL TUMOR: OVARIES
			LIVER	DISCOLORATION	+	PIGMENTATION PROLIFERATION OF BILE DUCT	+	FIBROMA: UTERUS
			PANCREAS			ISLET-CELL ADENOMA	+	ADENOMA: PITUITARY GLAND
			KIDNEYS			PIGMENTATION (BILATERAL) CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL)	++ +	
			OVARIES	ENLARGEMENT (UNILATERAL)	++	GRANULOSA-THECA CELL TUMOR (UNILATERAL) ATROPHY (UNILATERAL)	+++	
			UTERUS			FIBROMA		
			PITUITARY GLAND	ENLARGEMENT HEMORRHAGE	+	ADENOMA		
			BRAIN	IMPRESSION	+			

1) FATE : W / KILLED IN EXTREMIS

2) GRADE : NEGATIVE NOT PRESENTED

3) GRADE OF MASS :

A / SMALL AND/OR SINGULAR
B / MEDIAL AND/OR SPORADIC
C / LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F4-1345

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 1000 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1345	Y	743	HEART			FIBROSIS	+	POLYP: UTERUS
			LYMPH NODES (MESENT.) SPLEEN			ANGIECTASIA	+	ADENOMA: MAMMARY GLAND
						HEMOSIDEROSIS	++	
						EXTRAMEDULLARY HEMATOPOIESIS	+	
			BONE MARROW			ACTIVATION OF HEMATOPOIESIS	++	
			LIVER			FOCAL ATROPHY OF HEPATIC CELLS SMALL GRANULOMA	++ +	
			KIDNEYS	IMPRESSION (UNILATERAL)	+	CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) PIGMENTATION (BILATERAL)	++ ++	
			UTERUS	ENLARGEMENT	+	POLYP NECROSIS	++	
			THYROID GLANDS			HYPERPLASIA OF C-CELLS (UNILATERAL)	+	
			MAMMARY GLAND	MASS	A	ADENOMA		

1) FATE : Y , KILLED ON SCHEDULE

2) GRADE : NEGATIVE NOT PRESENTED

3) GRADE OF MASS :

A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

+, SLIGHT
++, MODERATE
+++, SEVERE

APPENDIX 11-F4-1346
CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 1000 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1346	Y	743	HEART			FIBROSIS	+	ADENOMA: PITUITARY GLAND
			SPLEEN			HEMOSIDEROSIS	++	
			LIVER			SMALL GRANULOMA	++	
						FOCAL ATROPHY OF HEPATIC CELLS	+	
						CHOLANGIOFIBROSIS	+	
			KIDNEYS			PIGMENTATION (BILATERAL)	++	
						CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL)	+	
			PITUITARY GLAND	HEMORRHAGE	+	ADENOMA		
			THYROID GLANDS			HYPERPLASIA OF C-CELLS (UNILATERAL)	+	
			MAMMARY GLAND			HYPERPLASIA	+	

1) FATE : Y , KILLED ON SCHEDULE

2) GRADE : NEGATIVE NOT PRESENTED

3) GRADE OF MASS :

A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

+, SLIGHT
++, MODERATE
+++, SEVERE

APPENDIX 11-F4-1347

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 1000 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1347	Y	743	HEART			FIBROSIS	+	MALIGNANT LYMPHOMA : SPLEEN
			LYMPH NODES (MESENT.)			ANGIECTASIA	+	
			ENLARGEMENT	++		MALIGNANT LYMPHOMA, PRIMARY HEMOSIDEROSIS	++	
			BONE MARROW			ACTIVATION OF HEMATOPOIESIS	++	
			LARYNGOPHARYNX			CYSTIC DILATATION OF GLAND	+	
			LIVER	ROUGHNESS OF SURFACE +++		MALIGNANT LYMPHOMA, METASTASIS SMALL GRANULOMA	++	
			KIDNEYS			CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) PIGMENTATION (BILATERAL)	+	
			UTERUS			CYSTIC ENDOMETRIAL HYPERPLASIA	+	
			ADRENAL GLANDS			ANGIECTASIA (UNILATERAL) VACUOLAR DEGENERATION OF CORTICAL CELLS (UNILATERAL)	++ +	
			BONE (FEMUR)			OSTEOSCLEROSIS	+	
			HARDERIAN GLANDS			INFILTRATION OF LEUCOCYTES (UNILATERAL)	+	
			BRAIN			PIGMENTATION	+	

1) FATE : Y , KILLED ON SCHEDULE 2) GRADE : NEGATIVE NOT PRESENTED 3) GRADE OF MASS :
 + , SLIGHT A , SMALL AND/OR SINGULAR
 ++ , MODERATE B , MEDIAL AND/OR SPORADIC
 +++ , SEVERE C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

APPENDIX 11-F4-1348

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 1000 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1348	Y	743	SPLEEN			HEMOSIDEROSIS EXTRAMEDULLARY HEMATOPOIESIS	++ +	PHEOCHROMOCYTOMA: ADRENAL GLANDS
			NASAL CAVITY			INFILTRATION OF LEUCOCYTES	+	C-CELL ADENOMA: THYROID GLANDS
			LUNG			CALCIFICATION OF VASCULAR WALL	+	
			LIVER			FOCAL ATROPHY OF HEPATIC CELLS	+	
			KIDNEYS			CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) PIGMENTATION (BILATERAL) CALCIFICATION (UNILATERAL)	++ +	
			UTERUS	ENLARGEMENT	+	DILATATION OF DUCT	+	
			PITUITARY GLAND	HEMORRHAGE	+	HEMORRHAGE	+	
			THYROID GLANDS	ENLARGEMENT (UNILATERAL)	++	C-CELL ADENOMA (UNILATERAL)		
			ADRENAL GLANDS			PHEOCHROMOCYTOMA (UNILATERAL) CONGESTION (UNILATERAL)	+	
			SKIN			FOLLICULITIS	++	
			MAMMARY GLAND			HYPERPLASIA	+	

1) FATE : Y , KILLED ON SCHEDULE

2) GRADE : NEGATIVE NOT PRESENTED

3) GRADE OF MASS :

A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

+ , SLIGHT
++ , MODERATE
+++ , SEVERE

APPENDIX 11-F4-1349
CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 1000 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1349	Y	743	HEART			FIBROSIS	+	GLIOSIS: BRAIN
			SPLEEN			HEMOSIDEROSIS EXTRAMEDULLARY HEMATOPOIESIS	++ +	
			LUNG			CALCIFICATION OF VASCULAR WALL HISTIOCYTOSIS	++ +	
			PAROTID GLANDS			ATROPHY OF ACINAR CELLS (UNILATERAL)	+	
			LIVER			FOCAL ATROPHY OF HEPATIC CELLS SMALL GRANULOMA	++ +	
			KIDNEYS			CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) PIGMENTATION (BILATERAL) CALCIFICATION (UNILATERAL)	++ ++ +	
			OVARIES			ATROPHY (UNILATERAL)	++	
			PITUITARY GLAND	HEMORRHAGE ENLARGEMENT	+	MIGRATION OF HEMOSIDERIN-LADEN CELLS	+	
			THYROID GLANDS			HYPERPLASIA OF C-CELLS (UNILATERAL)	+	
			ADRENAL GLANDS			HYPERPLASIA OF MEDULLARY CELLS (UNILATERAL) CONGESTION (BILATERAL)	++ +	
			EYE BALLS			CATARACT (UNILATERAL)	+	

1) FATE : Y , KILLED ON SCHEDULE

2) GRADE : NEGATIVE NOT PRESENTED

3) GRADE OF MASS :

A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

+, SLIGHT
++, MODERATE
+++, SEVERE

APPENDIX 11-F4-1349 CONTINUED
CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 1000 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE 4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2) 3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1349	Y	743 BRAIN			GLIOSIS	++	

1) FATE : Y , KILLED ON SCHEDULE	2) GRADE : NEGATIVE NOT PRESENTED + , SLIGHT ++ , MODERATE +++ , SEVERE	3) GRADE OF MASS : A , SMALL AND/OR SINGULAR B , MEDIAL AND/OR SPORADIC C , LARGE AND/OR MULTIPLE
4) DAYS : AFTER START OF TREATMENT		

APPENDIX 11-F4-1350

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 1000 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1350	Y	743	HEART			FIBROSIS THICKENING OF ARTERIAL WALL	+	NO SIGNIFICANT LESION
			LYMPH NODES (PULM. HILUS)			BLOOD ABSORPTION	+	
			LYMPH NODES (MESENT.)			ANGIECTASIA	+	
			SPLEEN			HEMOSIDEROSIS CONGESTION	++ +	
			NASAL CAVITY			INFILTRATION OF LEUCOCYTES	+	
			LUNG			CALCIFICATION OF VASCULAR WALL	+	
			LIVER	NODULE	+	FOCAL ATROPHY OF HEPATIC CELLS SMALL GRANULOMA HYPERPLASTIC NODULE	++ ++ +	
			PANCREAS			ATROPHY OF PANCREATIC ACINUS	+	
			KIDNEYS			PIGMENTATION (BILATERAL) CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL) CALCIFICATION (BILATERAL)	++ + +	
			PITUITARY GLAND	REDDISH CHANGE	+	CONGESTION	+	
			HARDERIAN GLANDS			INFILTRATION OF LEUCOCYTES (UNILATERAL)	+	

1) FATE : Y , KILLED ON SCHEDULE

2) GRADE : NEGATIVE NOT PRESENTED

3) GRADE OF MASS :

A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE

4) DAYS : AFTER START OF TREATMENT

+ , SLIGHT
++ , MODERATE
+++ , SEVERE

CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 1000 PPM FEMALE

STUDY NO. 83004

ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2)3) GRADE	HISTOPATHOLOGICAL FINDINGS	2) GRADE	PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS
1351	Y	743	HEART			FIBROSIS	+	NO SIGNIFICANT LESION
			SPLEEN			HEMOSIDEROSIS	++	
						EXTRAMEDULLARY HEMATOPOIESIS	+	
			LIVER	NODULE	+	HYPERPLASTIC NODULE	++	
						FATTY DEGENERATION OF HEPATIC CELLS	+	
						SMALL GRANULOMA	+	
			PANCREAS			ATROPHY OF PANCREATIC ACINUS	+	
			KIDNEYS			CHRONIC PROGRESSIVE GLOMERULONEPHROPATHY (BILATERAL)	+	
						PIGMENTATION (BILATERAL)	++	
						CALCIFICATION (UNILATERAL)	+	
			PITUITARY GLAND			HYPERPLASIA OF CHROMOPHOBE CELLS	+	
			THYROID GLANDS			HYPERPLASIA OF C-CELLS (UNILATERAL)	+	

1) FATE : Y / KILLED ON SCHEDULE	2) GRADE : NEGATIVE NOT PRESENTED + / SLIGHT ++ / MODERATE +++ / SEVERE	3) GRADE OF MASS : A / SMALL AND/OR SINGULAR B / MEDIAL AND/OR SPORADIC C / LARGE AND/OR MULTIPLE
4) DAYS : AFTER START OF TREATMENT		

APPENDIX 11-F4-1352
CHRONIC AND CARCINOGENIC INHALATION TOXICOLOGICAL STUDY
OF METHANOL IN FISCHER RAT

INDIVIDUAL PATHOLOGICAL FINDINGS

LEVEL AND SEX : 1000 PPM FEMALE

STUDY NO. 83004				PROBABLE CAUSE OF DEATH OR MAJOR PATHOLOGICAL FINDINGS		
ANIMAL NUMBER	1) FATE	4) DAYS	ORGAN	GROSS PATHOLOGICAL FINDINGS	2) 3) GRADE	HISTOPATHOLOGICAL FINDINGS
1352	Y	743	HEART			FIBROSIS
			SPLEEN			HEMOSIDEROSIS EXTRAMEDULLARY HEMATOPOIESIS
			NASAL CAVITY			INFILTRATION OF LEUCOCYTES
			LUNG			CHORDOMA, METASTASIS HISTIOCYTOSIS
			LIVER			FATTY DEGENERATION OF HEPATIC CELLS FOCAL ATROPHY OF HEPATIC CELLS SMALL GRANULOMA PROLIFERATION OF BILE DUCT
			KIDNEYS			PIGMENTATION (BILATERAL) CALCIFICATION (BILATERAL)
			UTERUS	MASS		LEIOMYOMA
			VERTEBRA			CHORDOMA, PRIMARY

1) FATE : Y , KILLED ON SCHEDULE

2) GRADE : NEGATIVE NOT PRESENTED

+ , SLIGHT
++ , MODERATE
+++ , SEVERE

4) DAYS : AFTER START OF TREATMENT

3) GRADE OF MASS :

A , SMALL AND/OR SINGULAR
B , MEDIAL AND/OR SPORADIC
C , LARGE AND/OR MULTIPLE